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A
V O Y A G E
T O
SOUTH AMERICA:

DESCRIBING AT LARGE,
The SPANISH CITIES, TOWNS, PROVINCES, &c.
on that extensive CONTINENT.

INTERSPERSED THROUGHOUT

With REFLEXIONS on whatever is peculiar in the
RELIGION and CIVIL POLICY; in the GENIUS,
CUSTOMS, MANNERS, DRESS, &c. &c. of the
several Inhabitants; whether NATIVES, SPANIARDS,
CREOLES, INDIANS, MULATTOES, or NEGROES.

TOGETHER WITH

The NATURAL as well as COMMERCIAL
HISTORY of the Country.

And an Account of their GOLD and SILVER MINES.

Undertaken by Command of the KING of SPAIN,

By Don GEORGE JUAN, and

Don ANTONIO DE ULLOA,

Both Captains of the SPANISH NAVY; and Members of the
ROYAL SOCIETIES of LONDON and BERLIN; and of
the ROYAL ACADEMY at PARIS.

Translated from the Original Spanish.

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CONTENTS

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VOLUME the SECOND.

BOOK I.

- Chap. 1. *Journey from Quito to Truxillo.* page 1
- Chap. 2. *Arrival at Truxillo. Description of that city, continuation of our journey to Lima.* p. 19
- Chap. 3. *Account of Lima.* p. 29
- Chap. 4. *Of the public entrance, &c. of the Vice-roy.* p. 46
- Chap. 5. *Of the inhabitants of Lima.* p. 52
- Chap. 6. *Of the climate; and of the whole country of Valles. Divisions of the seasons.* p. 64
- Chap. 7. *Inconveniences, distempers, and evils to which the city of Lima is subject.* p. 78
- Chap. 8. *Fertility of the territories of Lima.* p. 93
- Chap. 9. *Provisions at Lima.* p. 102
- Chap. 10. *Trade and commerce of Lima.* p. 106
- Chap. 11. *Jurisdiction of the Vice-roy of Peru: of the audiences; and diocesses of that kingdom.* p. 112
- Chap. 12. *Of the provinces in the diocesses of Truxillo, Guamanga, Cusco, and Arequipa.* p. 120
- Chap. 13. *Of the audience of Charcas; the jurisdictions and bishops sees in that archbishopric.* p. 141
- Chap. 14. *Account of the three diocesses of La Pas, Santa Cruz de la Sierra, and Tucuman, and of their respective provinces.* p. 156
- Chap. 15. *Account of Paraguay and Buenos Ayres. Missions of the Jesuits established in the former, their government and police.* p. 168

BOOK II.

- Chap. 1. *Voyage from Callao to Paita, thence to Guayaquil, and to Quito. Description of Paita.* p. 189
- Chap.

CONTENTS.

- Chap. 2. *Transactions at Quito. Unhappy occasion of our sudden return to Guayaquil. Second journey to Lima.* p. 195
- Chap. 3. *Voyage to Juan Fernandes. Account of the seas and winds in that Passage.* p. 206
- Chap. 4. *Account of Juan Fernandes. Voyage to Santa Maria. Thence to the bay of Conception. Nautical remarks.* p. 217
- Chap. 5. *Description of the city of Conception, in the kingdom of Chili; ravages it has suffered from the Indians; its commerce and fertility.* p. 232
- Chap. 6. *Description of Conception bay; its roads or harbours, fish, &c. singular mines of shells in its neighbourhood.* p. 246
- Chap. 7. *Description of the city of Santiago.* p. 253
- Chap. 8. *Account of that part of the kingdom of Chili within the jurisdiction of the audience of Santiago.* p. 258
- Chap. 9. *Commerce of Chili. Account of the wild Indians there.* p. 268
- Chap. 10. *Voyage to the islands of Juan Fernandes, and thence to Valparaíso.* p. 279
- Chap. 11. *Voyage to Callao. Second return to Quito, third journey to Lima.* p. 285

BOOK III.

- Chap. 1. *Departure from Callao. Arrival at Conception. Voyage from thence to the island of Fernando de Norona.* p. 293
- Chap. 2. *Nautical observations in the Voyage round Cape Horn. Currents and winds commonly met with in that passage. A table of the variations of the needle observed in sailing from Conception to Fernando de Norona.* p. 306
- Chap. 3. *Description of that island.* p. 317
- Chap. 4. *Voyage from Fernando de Norona. Engagement with two English privateers.* p. 326
- Chap. 5. *Voyage of the Delivrance to Louisbourg, where she was taken. Nautical remarks on the passage.* p. 335
- Chap. 6. *Don George Juan's Voyage from La Conception to Guarico; thence to Brest. His return to Madrid.* p. 347
- Chap. 7. *Account of the harbour and town of Louisbourg, and of its being taken by the English. Of the French fishery, and the trade carried on there.* p. 363
- Chap. 8. *The colony of Boston; its rise, progress, and other particulars.* p. 380
- Chap. 9. *Voyage from Louisbourg to Newfoundland; account of that island and the Cod-fishery. Voyage to England.* p. 389

A
V O Y A G E
T O
SOUTH AMERICA.

B O O K I.

Account of our Journey to LIMA; with a Description of the TOWNS and SETTLEMENTS on the Road, and of the City of LIMA.

C H A P. I.

Journey from QUITO, to TRUXILLO:

THE accidents to which human enterprizes and attempts are generally exposed, direct, with an inconstant, but wonderful harmony, the series of our actions and adventures, and introduce among them a great variety of alterations and changes. It is this variety, which, in vegetation embellishes nature, and equally displays the glory and wisdom of the supreme creator in the political and rational world; where we admire the surprizing diversity of events; the infinity of human actions, and

the different schemes and consequences in politics, the successive chain of which, renders history so delightful, and, to a reflecting mind, so instructive. The inconstancy, so often seen in things the most solid and stable, is generally one of the most powerful obstacles, to the advantages which might otherwise be derived from works of any duration. However great they are, either in reality, or idea, the perfection of them is not only impeded by the vicissitudes of time, and the inconstancy of things, but they even decline, and fall into ruins. Some, thro' want of proper support and encouragement; while others, from the mind being wearied out by delays, difficulties, and a thousand embarrassments, are abandoned; the imagination being no longer able to pursue its magnificent scheme.

To measure some degrees of the Meridian near the equator, the principal intention of our voyage, if considered only in idea, and abstractedly from the difficulties which attended its execution, must appear easy, and as requiring no great length of time; but experience convinced us, that a work of such importance to the improvement of science, and the interest of all nations, was not to be performed without delays, difficulties and dangers; which demanded attention, accuracy, and perseverance. Besides the difficulties necessarily attending the requisite accuracy of these observations, the delays we were obliged to make in order to take them in the most favourable seasons, the intervening clouds, the Paramos, and disposition of the ground were so many obstacles to our making any tolerable dispatch; and these delays, filled us with apprehensions, that if any other accidents should happen, the whole design would be rendered abortive, or at least, suffer a long interruption.

It has already been observed * that while we were at Cuenca, finishing our astronomical observations in
that

* Vol. I. Chap. II. Book V.

that extremity of the arch of the Meridian, we unexpectedly received a letter from the marquis de Villa Garcia, vice-roy of Peru, desiring us to come, with all speed to his capital, any delay on our part might have been improper; and we were solicitous not to merit an accusation of the least remissness in his majesty's service. Thus we were under a necessity of suspending our observations for some time; though all that remained was the second astronomical observation, northward, where the series of our triangles terminated.

THE occasion of this delay, arose from an account, received by the vice-roy, that war being declared between Spain and England, the latter was sending a considerable fleet on some secret designs into those seas. Several precautions had been taken to defeat any attempt; and the vice-roy, being pleased to conceive that we might be of some use to him in acquitting himself with honour on this occasion, committed to us the execution of some of his measures; giving us to understand, that the choice he made of us, was the most convincing proof of the high opinion he entertain'd of our abilities; and indeed our obligations were the greater, as the distance of four hundred leagues had not obliterated us from his remembrance, of which he now gave us so honourable a proof.

ON the 24th of September 1740, the vice-roy's letter was delivered to us, and we immediately repaired to Quito, in order to furnish ourselves with necessaries for the journey.

EVERY thing being performed, we set out from that city on the 30th of October, and determined to go by Guaranda and Guayaquil; for tho' there is a road by land thro' Cuenca and Loja, yet the other seemed to us the most expeditious, as the ways are neither so bad, nor mules and other beasts of carriage so difficult to be met with. The long stays in villages

were here also little to be apprehended, which are frequently rendered necessary in the other road by inundations, rivers, and precipices.

On the 30th of October we reached the Bodegas, or warehouses, of Babayoho, where taking a canoo we went down the river to Guayaquil; and embarking on board a small ship bound for Puna, we anchored in that port November the 3d. At this place we hired a large balza, which brought us thro' the gulph to Machala. For tho' the usual rout is by the Salto de Tumbez, we were obliged to alter our course, the pilot not being well acquainted with the entrance of a creek, thro' which you pass to the Salto.

On the 5th in the morning our balza landed us on the coast of Machala, from whence we travelled by land to the town, the distance being about two short leagues. The next day we sent away our baggage in a large canoo to the Salto de Tumbez; going myself in the same canoo, being disabled by a fall the preceding day. Don George Juan, with the servants followed on horseback: the whole country being level, is every where full of salt marshes, and overflows at high water, so that the track is not sufficient for two to go a breast.

THE Salto where I arrived on the 7th at night, is a place which serves as a kind of harbour for boats and small vessels. It is situated at the head of some creeks, particularly that of Jambeli, between fourteen and sixteen leagues from the coast, but intirely destitute of inhabitants, no fresh water being found in any part of the adjacent country; so that it only serves for landing goods consigned to Tumbez, where they are carried on mules, kept there for this purpose; and in this its whole trade consists. The Salto is uninhabited; nor does it afford the least shelter, all the goods brought thither being deposited in a small square; and, as rain is seldom or never known here,
there

there is little danger of their receiving any damage before they are carried to Tumbez.

HERE, as along the sides of all the creeks, the mangrove trees stand very thick, with their roots and branches so interwoven as to be absolutely impenetrable; tho' the swarms of moschetos are alone sufficient to discourage any one from going among them. The only defence against these insects is, to pitch a tent, till the beasts are loaded, and you again move forward. The more inland parts, where the tides do not reach, are covered with forests of smaller trees, and contain great quantities of deer; but at the same time are infested with tigers; so that if the continual stinging of the moschetos deprives travellers of their rest, it also prevents their being surprized by the tigers, of the fury of which there are many melancholy examples.

ON the 9th in the morning I arrived at the town of Tumbez, situated seven leagues from the Salto; the whole country thro' which the road lies is intirely waste, part of it being overflowed by the tides, and the other part dead sands, which reflect the rays of the sun so intensely, as to render it necessary in general to perform this journey in the night; for travelling seven leagues thither, and as many back without either water or fodder, is much too laborious for the mules to undergo in the day time. A drove of mules therefore never sets out from Tumbez for the Salto, till an account arrives, generally by one of the sailors belonging to the vessel, of the goods being landed, and every thing in readiness; as it would otherwise be lost labour, it being impossible that the mules should make any stay there.

DON George Juan had reached Tumbez on the 8th, and tho' he did every thing in his power to provide mules for continuing our journey, we were obliged to wait there some time longer. Nor could we make any advantage of our stay here, except to

observe the latitude, which we did on the ninth with a quadrant, and found it to be $3^{\circ} 13' 16''$ south.

NEAR Tumbez, is a river of the same name, which discharges itself into the bay of Guayaquil, almost opposite to the island of St. Clare. Barks, boats, balzas, and canoos may go up and down this river, being three fathom deep, and twenty-five broad; but it is dangerous going up it in the winter season, the impetuosity of its current being then increased by torrents from the mountains. At a little distance from the cordillera, on one side of the banks of the river, stands the town of Tumbez in a very sandy plain, interspersed with some small eminences. The town consists only of seventy houses, built of cane, and thatched, scattered up and down without any order or symetry. In these houses are about one hundred and fifty families of Mestizos, Indians, Mulattoes, and a few Spaniards. There are besides these other families living along the banks of the river, who having the conveniency of watering their grounds, continually imploy themselves in rural occupations.

THE heat is excessive; nor have they here any rain for several years successively; but when it begins to fall, it continues during the winter. The whole country from the town of Tumbez, to Lima, contained between the foot of the Cordillera and the sea, is known by the name of Valles, which we mention here, as it will often occur in the remaining parts of this narrative.

TUMBEZ was the place where in the year 1526, the Spaniards first landed in these parts of South America, under the command of Don Francisco Pizarro; and where he entered into several friendly conferences with the princes of the country, but vassals to the Yncas. If the Indians were surprized at the sight of the Spaniards, the latter were equally so at the prodigious riches which they every where saw, and the largeness of the palaces, castles, and
temples:

temples; of all of which, tho' built of stone, no vestiges are now remaining.

ALONG the delightful banks of this river, as far as the water is conveyed, maize, and all other fruits and vegetables that are natives of a hot climate, are produced in the greatest plenty. And in the more distant parts, which are destitute of this advantage, grows a kind of leguminous tree, called algarro-bale, producing a bean, which serves as food for all kinds of cattle. It resembles almost that known in Spain by the name of Valencia; its pod being about five or six inches long, and only four lines broad, of a whitish colour, intermixed with veins of a faint yellow. It proves a very strengthening food to beasts of labour, and is used in fattening those for the slaughter, which hence acquire a taste remarkably delicious.

ON the 14th, I arrived at the town of Piura, where I was obliged to wait some time for Don George Juan, during which I entirely recovered from the indisposition I before laboured under from my fall.

HERE I experienced the efficacy of the calagu-ala; which I happily found not to fall short of the great reputation it has acquired in several parts of Europe.

FROM the town of Tumbez, to the city of Piura, is 62 leagues, which we performed in 54 hours, exclusive of those we rested; so that the mules, which always travel one constant pace, go something above a league an hour. To the town of Amotape, the only inhabited place in the whole road, is 48 leagues, the remaining part is one continued desert. At leaving Tumbez, its river is crossed in Balzas; after which for about two leagues the road lies thro' thickets of Algarrobal, and other trees, at the end of which the road runs along the sea coast, to Mancora, 24 leagues from Tumbez. In order to travel this road, an opportunity at low-water must be taken for

crossing a place called Malpasso, about six leagues from Tumbez; for being a high steep rock, washed by the sea during the flood, and the top of it impassable from the many chasms and precipices, there is a necessity of passing between the sea and its basis, which is about half a league in length. And this must be done before the flood returns, which soon covers this narrow way, tho' it is very safe at low-water. During the remainder of this journey, it is equally necessary to consult the tide, for the whole country being sandy, the mules would, from their sinking so deep in it, be tired the first league or two. Accordingly travellers generally keep along the shore, which being washed by the breaking of the waves, the sand is more compact and firm; and consequently much easier to the beasts. During the winter, there runs thro' Mancora a small rivulet of fresh water, to the great relief of the mules; but in summer the little remaining in its course is so brackish, that nothing but absolute necessity can render it tolerable. The banks of this rivulet are so fertile by its water, that it produces such numbers of large Algarrobales, as to form a shady forest.

FROM Mancora, the road for fourteen leagues runs between barren mountains, at some distance from the coast, with very troublesome ascents and declivities, as far as the breach of Parinnas; where the same cautions are to be observed as at Mancora, and is the second stage; from whence the road lies over a sandy plain, ten leagues in length, to the town of Amotape, and at some distance from the coast.

This town, which stands in $4^{\circ} 51' 43''$ South latitude, is an appendix to the Parish of Tumbez, belonging to its lieutenancy, and in the jurisdiction of Piura. The houses are about 30 in number, and composed of the same materials with those of Tumbez; but the inhabitants are only Indians and Mestizos. A quarter of a league from it is a river of the
same

same name, and whose waters are of such prodigious use to the country, that it is every where cultivated, and divided into fields, producing plenty of the several grains, esculent vegetables, and fruits, natural to a hot climate; but like Tumbez, is infested with Moschitos. This river in summer may be forded; but in winter when the torrents descend from the mountains it must be crossed in a balza, the rapidity of its current being then considerably increased. There is a necessity for passing it in going to Piura, and after this for about four leagues the road lies thro' woods of lofty Algarrobales. These woods terminate on a sandy plain, where even the most experienced drivers and Indians sometimes lose their way, the wind leveling those hills of sand, which served as marks, and effacing all the tracks formerly made: so that in travelling this country, the only direction is the sun in the day time, and the stars in the night; and the Indians being little acquainted with the situation of these objects, are often bewildered, and exposed to the greatest hardships, before they can again find their way.

FROM what has been said the difficulties of travelling this road may be conceived. Besides as far as Amotape, not only all kinds of provisions must be carried, but even water, and the requisites for kindling a fire, unless your provision consists of cold meat. In this last stage is a mine of cope, a kind of mineral tar, great quantities of which are carried to Callao, and other ports, being used in ships instead of naphtha, but has the ill quality of burning the cordage; its cheapness however induces them to use it mixed with naphtha.

THE city of Piura, which is at present the capital of its jurisdiction, was the first Spanish settlement in Peru. It was founded in the year 1531 by Don Francisco Pizarro, who also built the first church in it. This city was originally called San Miguel de Piura, and stood in the valley of Targa-
fala,

fala, from whence on account of the badness of the air it was removed to its present situation, which is on a sandy plain. The latitude of it is $5^{\circ} 11' 1''$ South, and the variation of the needle we observed to be $8^{\circ} 13'$ Easterly. The houses are either of bricks dried in the sun, or a kind of reeds called Quinchas, and few of them have any story. Here the Corregidor resides, whose jurisdiction extends on one side along Valles, and on the other among the mountains. Here is an office for the royal revenue, under an accomptant or treasurer, who relieve each other every six months, one residing at the port of Paita, and the other in this place: At the former for receiving the duties on imports for goods landed there, and also for preventing a contraband trade; and at the latter for receiving the revenues and merchandizes on goods consigned from the mountains to Loja; or going from Tumbez to Lima.

THIS city contains near fifteen hundred inhabitants; and among these some families of rank, besides other Spaniards, Mestizos, Indians, and Mulattoes. The climate is hot and very dry, rains being seldom known here than at Tumbez: notwithstanding which it is very healthy. It has a river of great advantage to the inhabitants as well as the adjacent country, the soil of which is sandy, and therefore easier penetrated by the water; and being level the water is conveyed to different parts by canals. But in the summer the river is absolutely destitute of water, the little which descends from the mountains being absorbed before it reaches the city; so that the inhabitants have no other method of procuring water, but by digging wells in the bed of the river, the depth of which must be proportioned to the length of time the drought has continued.

PIURA has a hospital under the care of the Bethlehemites; and tho' patients afflicted with all kinds of distempers

distempers are admitted, it is particularly famous for the cure of the French disease, which is not a little forwarded by the nature of the climate. Accordingly there is here a great resort of persons infected with that infamous distemper; and are restored to their former health by a less quantity of the specific than is used in other countries, and also with greater ease and expedition.

As the whole territory of this jurisdiction within Valles produces only the Algarroba, maize, cotton, grain, a few fruits and esculent vegetables, most of the inhabitants apply themselves to the breeding of goats, great numbers of which are continually sold for slaughter, and from their fat they make soap, for which they are sure of a good market at Lima, Quito, and Panama; their skins are dressed into leather called Cordovan, and for which there is also a great demand at the above cities. Another branch of its commerce is the Cabuya, or Pita, a kind of plant from whence a very fine and strong thread is made; and which abounds in the mountainous parts of its jurisdiction. Great advantages are also made from their mules, as all the goods sent from Quito to Lima, and also those coming from Spain, and landed at the port of Païta, cannot be forwarded to the places they are consigned to but by the mules of this province; and from the immense quantity of goods coming from all parts, some idea may be formed of the number of beasts employed in this trade, which continues more or less throughout the year; but is prodigious when the rivers are shallow.

DON GEORGE JUAN being arrived at Piura, every thing was got ready with the utmost dispatch, and on the 21st we continued our journey. The next day we reached the town of Sechura, ten leagues distant from Piura, according to the time we were travel-

travelling it. The whole country between these two places is a level sandy desert.

THOUGH the badness and danger of the roads in Peru scarce admit of any other method of travelling than on mules, yet from Piura to Lima there is a conveniency of going in litters. These instead of poles are suspended on two large canes, like those of Guayaquil, and are hung in such a manner as not to touch the water in fording rivers, nor strike against the rocks in the ascents or descents of difficult roads.

As the mules hired at Piura perform the whole journey to Lima, without being relieved, and in this great distance, are many long deserts to be crossed, the natural fatigue of the distance, increased by the sandiness of the roads, render some intervals of rest absolutely necessary, especially at Sechura, because on leaving that town we enter the great desert of the same name. We tarried here two days: during which we observed the latitude, and found it $5^{\circ} 32' 33 \frac{1}{2}''$ S.

THE original situation of this town was contiguous to the sea, at a small distance from a point called Aguja; but being destroyed by an inundation, it was thought proper to build the present town of Sechura about a league distance from the coast, near a river of the same name, and which is subject to the same alterations as that of Piura; for at the time we crossed it no water was to be seen; whereas from the months of February or March till August or September, its water is so deep and the current so strong, as to be passed only in balzas; as we found in our second and third journey to Lima. When the river is dry the inhabitants make use of the above mentioned expedient of digging wells in its beds, where they indeed find water but very thick and brackish. Sechura contains about 200 houses of cane, and a large and handsome brick church; the inhabitants
are

are all Indians, and consist of near 400 families, who are all employed either as drivers of the mules or fishermen. The houses of all these towns are quite simple; the walls consisting only of common canes and reeds, fixed a little way in the ground, with flat roofs of the same materials, rain being hardly ever known here; so that they have sufficient light and air, both the rays of the sun and wind easily finding a passage. The Indian inhabitants of this place use a different language from that common in the other towns both of Quito and Peru; and this is frequently the case in great part of Valles. Nor is it only their language which distinguishes them, but even their accent; for besides their enunciation which is a kind of melancholy singing, they contract half of their last words, as if they wanted breath to pronounce them.

THE dress of the Indian women in these parts, consists only of an Anaco, like that of the women of Quito, except its being of such a length as to trail upon the ground. It is also much larger, but without sleeves, nor is it tied round them with a girdle. In walking they take it up a little, and hold it under their arms. Their head dress consists of cotton cloth laced or embroidered with different colours; but the widows wear black. The condition of every one may be known by their manner of dressing their hair, maids and widows dividing it into two platted locks, one hanging on each shoulder, whilst married women braid all their hair in one. They are very industrious, and usually employed in weaving napkins of cotton and the like. The men dress in the Spanish manner; and consequently wear shoes; but the women none. They are naturally haughty, of very good understandings, and differ in some customs from those of Quito. They are a proof of what has been observed (Book VI. Chap. VI. vol. 1.) with regard to the great improvement they

receive from a knowledge of the Spanish language; and accordingly it is spoken here as fluently as their own. They have genius, and generally succeed in whatever they apply themselves to. They are neither so superstitious, nor so excessively given to vice as the others; so that except in their colour and other natural appearances, they may be said to differ greatly from them; and even in their propensity to intemperance, and other popular customs of the Indians, a certain moderation and love of order is conspicuous among these. But to avoid tedious repetitions, I shall conclude with observing that all the Indians of Valles from Tumbez to Lima are industrious, intelligent, and civilized beyond what is generally imagined.

THE town of Sechura is the last in the jurisdiction of Piura, and its inhabitants not only refuse to furnish passengers with mules, but also will not suffer any person of whatever rank, to continue his journey, without producing the Corregidor's passport. The intention of this strictness is to suppress all abuses in trade; for there being besides this road which leads to the desert, only one other called the Rodeo; one of them must be taken; if that of the desert, mules must be hired at Sechura for carrying water for the use of the loaded mules when they have performed half their journey. This water is put into large callebashes, or skins, and for every four loaded mules one mule loaded with water is allowed, and also one for the two mules carrying the litter. When they travel on horseback, the riders carry their water in large bags or wallets made for that purpose; and every one of the passengers, whether in the litter or on horseback, provides himself with what quantity he thinks sufficient, as during the whole journey nothing is seen but sand and hills of it formed by the wind, and here and there, mas-

les of salt : but neither sprig, herb, flower, or any other verdure.

ON the 24th we left Sechura, and crossed the desert, making only some short stops for the ease of our beasts, so that we arrived the next day at five in the evening at the town of Morrope, 28 or 30 leagues distance from Sechura, tho' falsely computed more by the natives. The extent and uniform aspect of this plain, together with the continual motion of the sand which soon effaces all tracks, often bewilders the most experienced guides, who however shew their skill in soon recovering the right way; for which they make use of two expedients: 1st, to observe to keep the wind directly in their face; and the reverse upon their return; for the south winds being constant here, this rule cannot deceive them: 2d, to take up a handful of sand at different distances, and smell to it; for as the excrements of the mules impregnate the sand more or less, they determine which is the true road by the scent of it. Those who are not well acquainted with these parts, expose themselves to great danger, by stopping to rest or sleep; for when they again set forward, they find themselves unable to determine the right road; and when they once have lost the true direction, it is a remarkable instance of providence if they do not perish with fatigue or distress, of which there are many melancholy instances.

THE town of Morrope consists of between 70 and 80 houses, built like those in the preceeding towns; and contains about 160 families, all Indians. Near it runs a river called Pozuelos, subject to the same changes as those above-mentioned; tho' the lands bordering on its banks are cultivated, and adorned with trees. The instinct of the beasts used to this road is really surprizing; for, even at the distance of four leagues, they smell its water, and become so impatient that it would be difficulty to stop them; accordingly

cordingly they pursue themselves the shortest road, and perform the remainder of the journey with remarkable chearfulness and dispatch.

ON the 26th we left Morrope, and arrived at Lambayeque, four leagues from it: and being obliged to continue there all the 27th, we observed its latitude, and found it $6^{\circ} 41' 37''$ S. This place consists of about 1500 houses, built some of bricks, others of bajareques, the middle of the walls being of cane, and plaistered over, both on the inside and outside with clay: the meanest consists entirely of cane, and are the habitations of the Indians. The number of inhabitants amount to about 3000, and among them, some considerable and opulent families; but the generality are poor Spaniards, Mulattoes, Mestizos, and Indians. The parish church is built of stone, large and beautiful, and the ornaments splendid. It has four chapels called Ramos, with an equal number of priests, who take care of the spiritual concerns of the Indians, and also attend, by turns, on the other inhabitants.

THE reason why this town is so populous is, that the families which formerly inhabited the city of Sana, on its being sacked in 1685, by Edward Davis, an English adventurer, removed hither; being under a farther necessity of changing their dwelling from a sudden inundation of the river of the same name, by which every thing that had escaped the ravages of the English, was destroyed. It is the residence of a Corregidor, having under his jurisdiction, besides many other towns, that of Morrope. One of the two officers of the revenue appointed for Truxillo, resides here. A river called also Lambayeque, washes this place; which, when the waters are high, as they were when we arrived here, is crossed over a wooden bridge; but at other times may be forded, and often is quite dry.

THE neighbourhood of Lambayeque, as far as the industry

industry of its inhabitants have improved it, by canals cut from the river, abounds in several kinds of vegetables and fruits; some of the same kind with those known in Europe, and others of the Creole kind, being European fruits planted there, but which have undergone considerable alterations from the climate. About ten leagues from it are espaliers of vines, from the grapes of which they make wine, but neither so good, nor in such plenty as in other parts of Peru. Many of the poor people here, employ themselves in works of cotton, as embroidered handkerchiefs, quilts, mantelets, and the like.

ON the 28th, we left Lambayeque, and having passed thro' the town of Monsefu, about four or five leagues distant from it, we halted near the sea coast, at a place called Las Lagunas, or the Fens; these containing fresh water left in them by the overflowings of the River Sana. On the 29th we forded the river Xequetepeque, leaving the town of that name, at the distance of about a quarter of a league, and in the evening arrived at the town of St. Pedro, twenty leagues from Lambayeque, and the last place in its jurisdiction. By observation we found its latitude to be $7^{\circ} 25' 49''$ S.

St. Pedro consists of about 130 baxaraque houses, and is inhabited by 120 Indian families, 30 of whites and Mestizos, and 12 of Mulattoes. Here is a convent of Augustines, tho' it seldom consists of above three persons, the prior, the priest of the town, and his curate. Its river is called Pacasmayo, and all its territories produce grain and fruits in abundance. A great part of the road from Lambayeque to St. Pedro, lies along the shore, not indeed at an equal, but never at a great distance from it.

ON the 30th of November, we passed through the town of Payjan, which is the first in the jurisdiction of Truxillo, and on the first of December we reached that of Chocope, 13 or 14 leagues distant from

St. Pedro. We found its latitude to be $7^{\circ} 46' 40''$ S. The adjacent country being watered by the river called Chicama, distributed to it by canals, produces the greatest plenty of sugar canes, grapes, fruits of different kinds, both European and Creole: and particularly maize, which is the general grain used in all Valles. From the banks of the river Lambayeque to this place, sugar canes flourish near all the other rivers, but none of them equal, either in goodness or quantity, those near the river Chicama.

CHOCOPE consists of betwixt 80 and 90 baxaque houses, covered with earth. The inhabitants, who are between 60 and 70 families, are chiefly Spaniards, with some of the other casts; but not above 20 or 25 of Indians. Its church is built of bricks, and both large and decent. They report here, as something very remarkable, that in the year 1726, there was a continual rain of 40 nights, beginning constantly at four or five in the evening, and ceasing at the same hour next morning, the sky being clear all the rest of the day. This unexpected event, intirely ruined the houses, and even the brick church, so that only some fragments of its walls remained. What greatly astonished the inhabitants was, that during the whole time the southerly winds, not only continued the same, but blew with so much force, that they raised the sand, tho' thoroughly wet. Two years after a like phænomenon was seen for about eleven or twelve days, but was not attended with the same destructive violence as the former. Since which time nothing of this kind has happened, nor had any thing like it been remembered for many years before.

CHAP. II.

Our arrival at TRUXILLO; a Description of that City, and the Continuance of our Journey to LIMA.

WITHOUT staying any longer at Chocope than is usual for resting the beasts, we continued our journey, and arrived at the city of Truxillo, 11 leagues distant, and according to our observations, in $8^{\circ} 6' 3''$ S. latitude. This city was built in the Year 1535, by Don Francisco Pizarro, in the valley of Chimo. Its situation is pleasant, notwithstanding the sandy soil, the universal defect of all the towns in Valles. It is surrounded by a brick wall, and its circuit entitles it to be classed among cities of the third order. It stands about half a league from the sea, and two leagues to the northward of it is the port of Guanchaco, the channel of its maritime commerce. The houses make a creditable appearance. The generality are of bricks, decorated with stately balconies, and superb porticos; but the other of baxareques. Both are however low, on account of the frequent earthquakes; few have so much as one story. The corregidor of the whole department resides in this city; and also a bishop (whose diocese begins at Tumbes) with a chapter consisting of three dignitaries, namely, the dean, arch-deacon, and chanter; four canons, and two prebendaries. Here is an office of revenue, conducted by an accomprant and treasurer; one of whom, as I have already observed, resides at Lambayeque. Convents of several orders are established here; a college of Jesuits, an hospital of our lady of Bethlehem, and two nunneries, one of the order of St. Clare, and the other of St. Teresa.

THE inhabitants consist of Spaniards, Indians, and

all the other casts. Among the former are several very rich and distinguished families. All in general are very civil and friendly, and regular in their conduct. The women in their dress and customs follow nearly those of Lima, an account of which will be given in the sequel. Great number of chaises are seen here, there not being a family of any credit without one; as the sandy soil is very troublesome in walking.

IN this climate, there is a sensible difference between winter and summer, the former being attended with cold, and the latter with excessive heat. The country of this whole valley is extremely fruitful, abounding with sugar canes, maize, fruits, and garden stuff; and with vineyards and olive yards. The parts of the country nearest the mountains produce wheat, barley, and other grain; so that the inhabitants enjoy not only a plenty of all kinds of provisions, but also make considerable exports to Panama, especially of wheat and sugars. This remarkable fertility, has been improved to the great embellishment of the country; so that the city is surrounded by several groves, and delightful walks of trees. The gardens also are well cultivated, and make a very beautiful appearance; which with a continual serene sky, prove not less agreeable to travellers than to the inhabitants.

ABOUT a league from the city is a river whose waters are conducted by various canals, through this delightful country. We forded it on the 14th when we left Truxillo; and, on the 5th after passing thro' Moche, we came to Biru, ten leagues from Truxillo. The pass of the corregidor of Truxillo must be produced to the alcade of Moche, for without this, as before at Sechura, no person would be admitted to continue his journey.

BIRU, which lies in $8^{\circ} 24' 59''$ S. latitude, consists of 50 baxareque houses, inhabited by 70 families of Spaniards, Indians, Mulattoes and Mestizos.

About

About half a league to the northward of it, is a rivulet, from which are cut several trenches, for watering the grounds. Accordingly the lands are equally fertile with those of Truxillo, and the same may be said of the other settlements farther up the river. This place we left the same day, travelling sometimes along the shoar, sometimes at a league distance from it.

ON the 6th we halted in a desert place called Tambo de Chao, and afterwards came to the banks of the river Santa; which having passed by means of the Chimbadores, we entered the town of the same name, which lies at about a quarter of a league from it, and 15 from Biru. The road being chiefly over vast sandy plains, intercepted between two hills.

THE river Santa, at the place where it is usually forded, is near a quarter of a league in breadth, forming five principal streams, which run during the whole year with great rapidity. It is always forded, and for this purpose persons make it their business to attend with very high horses, trained up to stem the current, which is always very strong. They are called Chimbadores; and must have an exact knowledge of the fords, in order to guide the loaded mules in their passage, as otherwise the fording this river would be scarce practicable, the floods often shifting the beds of the river; so that even the Chimbadores themselves are not always safe: for the fords being suddenly changed in one of the streams, they are carried out of their depth by the current, and irretrievably lost. During the winter season, in the mountains, it often swells to such a height, as not to be forded for several days, and the passengers are obliged to wait the fall of the waters, especially if they have with them any goods; for those who travel without baggage may, by going six or eight leagues above the town, pass over it on balzas made of calabashes; tho' even here not without danger, for if the balze

happens to meet any strong current, it is swept away by its rapidity, and carried into the sea. When we forded it, the waters were very low, notwithstanding which, we found from three several experiments made on its banks, that the velocity of the current was 35 toises in $29\frac{1}{2}$ seconds; so that the current runs 4271 toises, or a league and an half in an hour. This velocity does not indeed equal what M. de la Condamine mentions in the narrative of his voyage down the river Maragnon, or that of the Amazonas, at the Pango, or streight of Manceriche. But doubtless, when the river of Santa is at its usual height, it exceeds even the celerity of the Pango; at the time of making our observations, it was at its lowest.

THE latitude of the town of Santa Miria de la Parrilla, for so it is also called, we determined by an observation of some stars, not having an opportunity of doing it by the sun, and found it $8^{\circ} 57' 36''$ S. It was first built on the sea coast, from which it is now something above half a league distant. It was large, populous, the residence of a Corregidor, and had several convents. But in 1685, being pillaged and destroyed by the above-mentioned English adventurer, its inhabitants abandoned it, and such as were not able to remove to a place of greater security, settled in the place where it now stands. The whole number of houses in it at present does not exceed thirty; and of these the best are only of baxareque, and the others of straw. These houses are inhabited with about 50 poor families consisting of Indians, Mulattoes, and Mestizos.

DURING our observations we were entertained with a sight of a large ignited exhalation, or globe of fire in the air, like that mentioned in the first volume of this work, tho' not so large, and less effulgent. Its direction was continued for a considerable time towards the west, till having reached the sea coast, it disappeared with an explosion like that of a cannon. Those
who

who had not seen it were alarmed, and imagining it to be a cannon fired by some ship arrived in the port, ran to arms, and hastened on horseback to the shore, in order to oppose the landing of the enemy. But finding all quiet, they returned to the town, only leaving some centinels to send advice, if any thing extraordinary should happen. These igneous phænomena are so far from being uncommon all over Valles, that they are seen at all times of the night, and some of them remarkably large, luminous, and continuing a considerable time.

THIS town and its neighbourhood are terribly infested with Moschitos. There are indeed some parts of the year when their numbers decrease, and sometimes, tho' very seldom, none are to be seen; but they generally continue during the whole year. The country from Piura upwards is free from this troublesome insect, except some particular towns, situated near rivers; but they swarm no where in such intolerable numbers as at Santa.

LEAVING this town on the 8th, we proceeded to Guaca-Tambo, a plantation so called, eight leagues distance from Santa, and contiguous to it is the Tambo, an inn built by the Yncas for the use of travellers. It has a shed for the convenience of passengers, and a rivulet running near it.

ON the 9th we came to another plantation known by the name of Manchan, within a league of which we passed through a village called Casma la Baxa, having a church, with not more than ten or twelve houses. Half way betwixt this and Manchan is another rivulet. The latter plantation is about eight leagues distant from the former. From Manchan on the tenth we travelled over those stony hills called the Culebras, extremely troublesome, particularly to the litters, and on the following day being the 11th, we entered Guarmey, 16 leagues from Manchan; and after travelling about three leagues further we reached

the Pascana, or resting place, erected instead of a Tambo or inn, and called the Tambo de Culebras. The town of Guarmey is but small and inconsiderable, consisting only of 40 houses, and these no better than the preceding. They are inhabited by about 70 families, few of which are Spaniards. Its latitude is $10^{\circ} 3' 53''$ S. The corregidor has obtained leave to reside here continually, probably to be free from the intolerable plague of the Moschitos at Santa, where formerly was his residence.

ON the 13th we proceeded from hence to a place called Callejones, travelling over 13 leagues of very bad road, being either sandy plains, or craggy eminences. Among the latter is one, not a little dangerous, called Salto del Frayle, or the Friar's leap. It is an entire rock, very high, and, towards the sea, almost perpendicular. There is however no other way, tho' the precipice cannot be viewed without horror; and even the mules themselves seem afraid of it by the great caution with which they take their steps. On the following day we reached Guamanmago, a hamlet at some distance from the river Barranca, and belonging to the town of Patavirca, about eight leagues from the Callejones. This town is the last in the jurisdiction of Santa or Guarmey.

PATAVIRCA consists only of 50 or 60 houses, and a proportional number of inhabitants; among whom are some Spanish families, but very few Indians. Near the sea coast, which is about three quarters of a league from Guamanmago, are still remaining some huge walls of unburnt bricks; being the ruins of an ancient Indian structure; and its magnitude confirms the tradition of the natives, that it was one of the palaces of the ancient caesars, or princes; and doubtless its situation is excellently adapted to that purpose, having on one side a most fertile and delightful country, and on the other, the refreshing prospect of the sea.

ON the 15th we proceeded to the banks of the river Barranca, about a quarter of a league distant. We easily forded it, under the direction of Chimba-dores. It was now very low, and divided into three branches, but being full of stones is always dangerous. About a league further is the town of Barranca, where the jurisdiction of Guaura begins. The town is populous, and many of its inhabitants Spaniards, tho' the houses do not exceed 60 or 70. The same day we reached Guaura, which from Guamanmayo, makes a distance of nine leagues.

THIS town consists only of one single street, about a quarter of a league in length, and contains about 150 or 200 houses; some of which are of bricks, others of baxareques; besides a few Indian huts.

THIS town has a parish church, and a convent of Franciscans. Near it you pass by a plantation, extending above a league on each side of the road, which is every where extremely delightful; the country eastward, as far as the eye can reach, being covered with sugar-canes, and westward divided into fields of corn, maize, and other species of grain. Nor are these elegant improvements confined to the neighbourhood of the town, but the whole valley, which is very large, makes the same beautiful appearance.

AT the South-end of the town of Guaura, stands a large tower, with a gate, and over it, a kind of redoubt. This tower is erected before a stone bridge, under which runs Guaura river; and so near to the town that it washes the foundations of the houses, but without any damage, being a rock. From the river is a suburb which extends above half a league, but the houses are not contiguous to each other; and the groves and gardens with which they are intermixed, render the road very pleasant. By a solar observation, we found the latitude of Guaura to be $11^{\circ} 3' 36''$ S. The sky is clear, and the temperature

perature of the air healthy and regular. For though it is not without a sensible difference in the seasons, yet the cold of the winter, and the heats of summer are both easily supportable.

In proceeding on our journey from Guarmey we met with a great many remains of the edifices of the Yncas. Some were the walls of palaces; others, as it were large dykes, by the sides of spacious highways; and others fortresses, or castles, properly situated for checking the inroads of enemies. One of the latter monuments stands about 2 or 3 leagues North of Pativirca, not far from a river. It is the ruins of a fort, and situated on the top of an eminence at a small distance from the sea; but the vestiges only of the walls are now remaining.

FROM Guaura we came to the town of Chancay; and though the distance between this is reckoned only twelve leagues, we concluded, by the time we were travelling it to be at least fourteen. From an observation we found its latitude $11^{\circ} 33' 47''$ S. The town consists of about 300 houses, and Indian huts; is very populous, and among other inhabitants can boast of many Spanish families, and some of distinguished rank. Besides its parish church, here is a convent of the order of St. Francis, and a hospital chiefly supported by the benevolence of the inhabitants. It is the capital of the jurisdiction of its name, and belongs to that of Guaura. The Corregidor, whose usual residence is at Chancay, appoints a deputy for Guaura. The adjacent country is naturally very fertile, and every where well watered by canals cut from the river Passamayo, which runs about a league and a half to the Southward of the town. These parts are every where sowed with maize, for the purpose of fattening hogs, in which article is carried on a very considerable trade; the city of Lima being furnished from hence.

We left Chancay the 17th; and after travelling

a league beyond the river Passamayo, which we forded, arrived at the Tambo of the same name, situated at the foot of a mountain of sand, exceeding troublesome, both on account of its length, steepness, and difficulty in walking; so that it is generally passed in the night, the soil not being then so fatiguing.

FROM thence on the 18th we reached Tambo de Ynca, and after travelling 12 leagues from the town of Chancay, we had at length the pleasure of entering the city of Lima.

FROM the distances careful'y set down during the whole course of the journey, it appears that from Tumbes to Piura is 62 leagues; from Piura to Truxillo 89, and from Truxillo to Lima 113; in all 264 leagues. The greatest part of this long journey is generally performed by night; for the whole country being one continued sand, the reflection of the sun's rays, is so violent, that the mules would be overcome by the heat; besides the want of water, herbage, and the like. Accordingly the road all along, is rather distinguished by the bones of the mules, which have sunk under their burdens, than by any track or path. For notwithstanding they are continually passing and re-passing throughout the whole year, the winds quickly efface all the prints of their feet. This country is also so bare, that when a small herb or spring happens to be discovered, it is a sure sign of being in the neighbourhood of houses. For these stand near rivers, the moisture of which fertilizes these arid wastes, so that they produce that verdure not to be seen in the uninhabited parts, as they are such, merely from their being destitute of water; without which no creature can subsist, nor any lands be improved.

IN the towns we met with plenty of all necessary provisions; as fish, fowl, bread, fruits, and wine; all extremely good, and at a reasonable price; but
the

the traveller is obliged to dress his meat himself, if he has not servants of his own to do it for him ; for in the greatest parts of the towns he will not meet with any one, inclinable to do him that piece of service, except in the larger cities where the masters of inns furnish the table. In the little towns, the inns, or rather lodging-houses, afford nothing but shelter ; so that travellers are not only put to the inconvenience of carrying water, wood and provisions from one town to another, but also all kinds of kitchen utensils. Besides tame fowl, pigeons, peacocks and geese, which are to be purchased in the meanest towns, all cultivated parts of this country abound in turtle doves, which live intirely on maize and the seeds of trees, and multiply exceedingly ; so that shooting them, is the usual diversion of travellers while they continue in any town ; but except these, and some species of small birds, no others are to be had during the whole journey. On the other hand, no ravenous beasts, or venomous reptiles are found here.

THE distribution of waters by means of canals, which extend the benefit of the rivers to distant parts of the country, owes its origin to the royal care and attention of the Yncas ; who among other marks of their zeal for promoting the happiness of their subjects, taught them by this method, to procure from the earth, whatever was necessary either for their subsistence, or pleasure. Among these rivers, many are entirely dry or very low, when the waters cease to flow from the mountains ; but others, as those of Santa Baranca, Guaura, Passamayo, and others, continue to run with a full stream during the greatest drought.

THE usual time when the water begins to increase in these rivers is the beginning of January or February, and continues till June, which is the winter among the mountains ; and, on the contrary, the
summer

summer in Valles; in the former it rains, while in the latter the sun darts a violent heat, and the south winds are scarce felt. From June the waters begin to decrease, and in November or December the rivers are at their lowest ebb, or quite dry; and this is the winter seasons in Valles, and the summer in the mountains. So remarkable a difference is there in the temperature of the air, tho' at so small a distance.

CHAP. III.

Account of the City of LIMA, the Capital of PERU.

FORTUITOUS events may sometimes, by their happy consequences, be classed among premeditated designs. Such was the unforeseen cause which called us to Peru; for otherwise the history of our voyage would have been deprived of a great many remarkable and instructive particulars; as our observations would have been limited to the province of Quito. But by this invitation of the vice-roy of Peru, we are now enabled to lead the reader into that large and luxuriant field, the fertile province of Lima, and the splendid city of that name, so justly made the capital of Peru, and the queen of all the cities in South America. It will also appear that our work would have suffered a great imperfection, and the reader consequently disappointed in finding no account of those magnificent particulars, which his curiosity had doubtless promised itself, from a description of this famous city, and an accurate knowledge of the capital province. Nor would it have been any small mortification to ourselves, to have lost the opportunity of contemplating those noble objects, which so greatly increase the value of our work, tho' already enriched with such astronomical observations

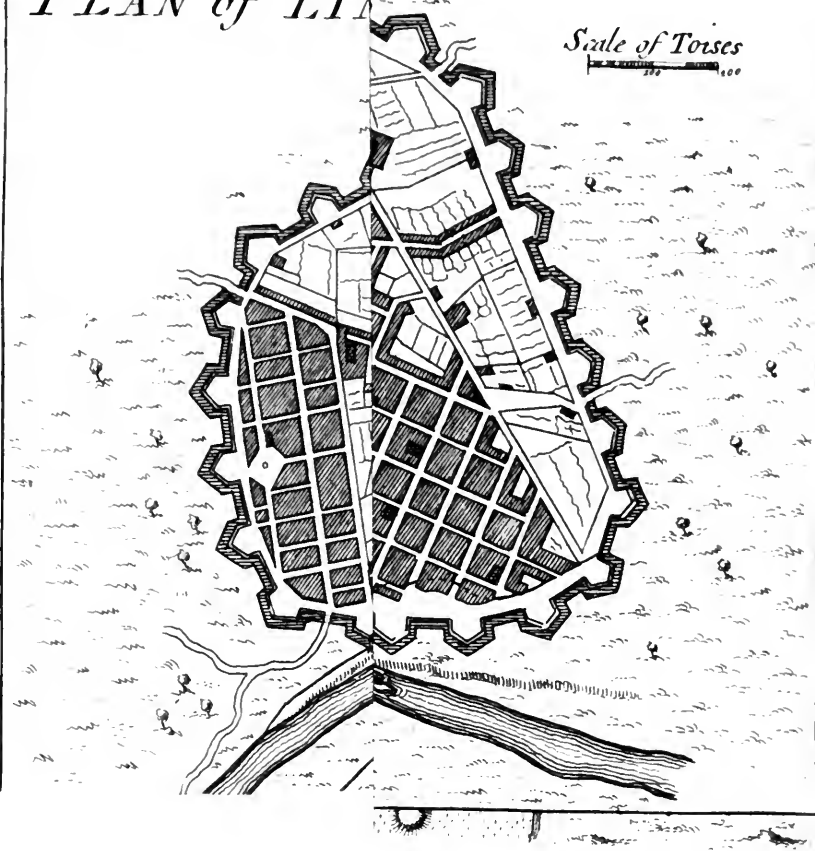
observations and nautical remarks, as we hope will prove agreeable to the intelligent reader. At the same time it opens a method of extending our researches into the other more distant countries, for the farther utility and ornament of this voyage; which, as it was founded on the most noble principles, should be conducted and closed with an uniform dignity.

My design however is not to represent Lima in its present situation, as I should then, instead of noble and magnificent objects, introduce the most melancholy and shocking scenes; ruined palaces, churches, towers, and other stately works of art, together with the inferior buildings of which this opulent city consisted, now thrown into ruin and confusion; by the tremendous earthquake of October the 28th 1746; the affecting account of which reached Europe with the swiftness which usually attends unfortunate advices, and concerning which, we shall be more particular in another place. I shall not therefore describe Lima, as wasted by this terrible convulsion of nature; but as the emporium of this part of *America*, and endeavour to give the reader an idea of its former glory, magnificence, opulence, and other particulars which rendered it so famous in the world, before it suffered under this fatal catastrophe; the recollection of which cannot fail of being painful to every lover of his country, and every person of humanity.

THE city of Lima, or as it is also called the city of the kings, was, according to Garcilaso, in his history of the Yncas, founded by Don Francisco Pizarro, on the feast of the Epiphany, 1535; tho' others affirm that the first stone was not laid till the 18th of January that year; and the latter opinion is confirmed by the act, or record of its foundation, still preserved in the archives of that city. It is situated in the spacious and delightful valley of Rimac, an Indian Word, and the true name of the city itself, from a corrupt pronounciation of which word the Spaniards have

*PLAN of LIN**Scale of Toises*

100 100



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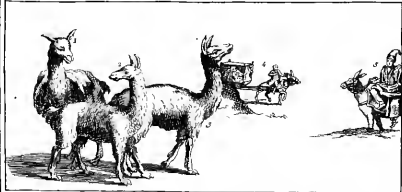
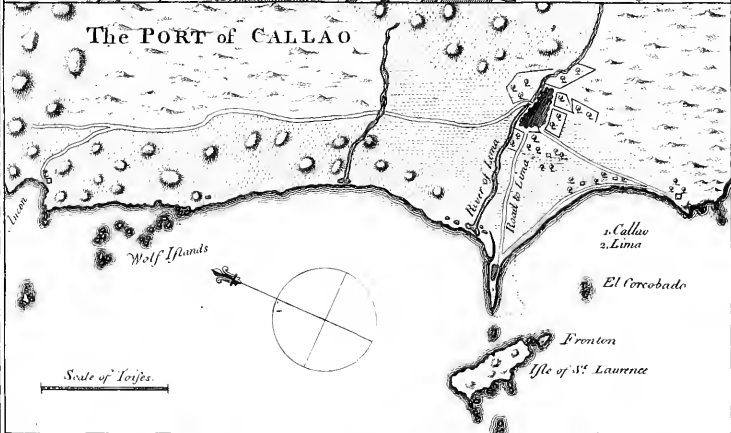
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PLAN of LIMA

Scale of Toises
1000 2000 3000



The PORT of CALLAO



1. The Llama or Peruvian Sheep.
2. Vicuña.
3. The Huamoa.
4. The Catzpa used at Lima.
5. A Mestizo woman on horseback.
6. A Lady of Lima.



7. A Spaniard in the Peruvian dress.
8. A Lady of Lima in a riding dress.
9. A Mulatto woman.
10. A Negro servant.

have derived Lima. Rimac is the name by which both the valley and the river are still called. This appellation is derived from an idol to which the native Indians used to offer sacrifice, as did also the Yncas, after they had extended their empire hither; and as it was supposed to return answer to the prayers addressed to it, they called it by way of distinction Rimac, or, he who speaks. Lima, according to several observations we made for that purpose, stands in the latitude of $12^{\circ} 2' 21''$ S. and its longitude from the meridian of Teneriffe is $299^{\circ} 27' 7\frac{2}{3}''$. The variation of the needle is $9^{\circ} 2' 30''$ easterly.

Its situation is one of the most advantageous that can be imagined; for being in the center of that spacious valley, it commands the whole without any difficulty. Northward, tho' at a considerable distance, is the cordillera, or chain of the Andes; from whence some hills project into the valley, the nearest of which to the city are those of St. Christopher, and Amancaes. The perpendicular height of the former, according to a geometrical mensuration performed by Don George Juan, and M. de la Condamine in 1737, is 134 toises; but father Feuilleé, makes it 136 toises and one foot, which difference doubtless proceeds from not having measured with equal exactness, the base on which both founded their calculations. The height of the Amancaes, is little less than the former, and situated about a quarter of a league from the city.

THE river, which is of the same name, washes the walls of Lima, and when not increased by the torrents from the mountains is easily forded; but at other times, besides the increase of its breadth, its depth and rapidity, render fording impossible; and accordingly a very elegant and spacious stone bridge is built over it, having at one end a gate, the beautiful architecture of which is equal to the other parts of this useful structure. This gate forms the entrance into the city, and leads to the grand square, which

which is very large and finely ornamented. In the center is a fountain, equally remarkable for its grandeur and capacity. In the center is a bronze statue of fame, and on the angles are four small basins. The water is ejected through the trumpet of the statue, and also through the mouths of eight lions which surround it, and greatly heighten the beauty of this work. The east side of the square is filled by the cathedral and the archiepiscopal palace, whose height surpasses the other buildings in the city. Its principal foundations, and the bases of its columns and pilasters, together with the capital front which faces the west, are of free-stone; the inside resembles that of Seville, but not so large. The outside is adorned with a very magnificent facade or frontispiece, rising into two lofty towers, and in the center is the grand portal. Round the whole runs a grand gallery, with a balustrade of wood, resembling brass, in colour, and at proper distances are several pyramids which greatly augment the magnificence of the structure. In the north side of the square is the vice-roy's palace, in which are the several courts of justice, together with the officers of revenue, and the state prison. This was formerly a very remarkable building both with regard to its largeness and architecture, but the greatest part of it being thrown down by the dreadful earthquake with which the city was visited, Oct. 20th, 1687, it now consists only of some of the lower apartments erected on a terras, and is used as the residence of the vice-roy and his family.

ON the West side which faces the cathedral, is the council-house, and the city prison; the South side is filled with private houses, having only one story; but the fronts being of stone, their uniformity, porticoes, and elegance, are a great embellishment to the square, each side of which is 80 toises.

THE form of the city is triangular, the base, or longest side, extending along the banks of the river.

Its

Its length is 1920 toises, or exactly two thirds of a league. Its greatest breadth from N. to S. that is, from the bridge to the angle opposite to the base, is 1080 toises, or two fifths of a league. It is surrounded with a brick wall, which answers its original intention, but is without any manner of regularity. This work was begun and finished by the duke de la Palata in the year 1685. It is flanked with 34 bastions, but without platforms or embrasures; the intention of it being merely to inclose the city, and render it capable of sustaining any sudden attack of the Indians. It has, in its whole circumference, seven gates, and three posterns.

ON the side of the river opposite to the city is a suburb, called St. Lazaro, which has, within these few years, greatly increased. All the streets of this suburb, like those of the city, are broad, parallel, or at right-angles, some running from N. to S. and others from E. to W. forming squares of houses, each 150 yards in front, the usual dimensions of all these quadras or squares in this country, whereas those of Quito are only 100. The streets are paved, and along them run streams of water, conducted from the river a little above the city; and being arched over contribute to its cleanliness, without the least inconveniency.

THE houses, though for the most part low, are commodious, and make a good appearance. They are all of Baxareque, and Quincha. They appear indeed to be composed of more solid materials, both with regard to the thickness of the principal walls, and the imitation of cornices on them; and that they may the better support themselves under the shocks of earthquakes, of which this city has had so many dreadful instances, the principal parts are of wood, mortised into the rafters of the roof, and those which serve for walls are lined both within and without with wild canes, and chagllas or osiers; so that the timber work is totally inclosed. These osiers

are plastered over with clay, and white washed, but the fronts painted in imitation of free-stone. They afterwards add cornices and porticos which are also painted of a stone colour. Thus the whole front imposes on the sight, and strangers suppose them to be built of those materials which they only imitate. The roofs are flat, and covered only so far as is necessary to keep out the wind and intercept the rays of the sun. The pieces of timber, of which the roofs are formed, and which on the inside are decorated with elegant mouldings and other ornaments, are covered with clay to preserve them from the sun. This slender covering is sufficient as no violent rains are ever known here. Thus the houses are in less danger than if built of more compact materials; for the whole building yields to the motions of the earthquakes, and the foundations which are connected with the several parts of the building follow the same motion; and by that means are not so easily thrown down.

THE wild canes, which serve for the inner parts of the walls, resemble in length and bigness, those known in Europe, but without any cavity. The wood of them is very solid, and little subject to rot. The chaglla is also a kind of shrub growing wild in the forests and on the banks of rivers. It is strong and flexible like the osier. These are the materials of which the houses in all the towns of Valles mentioned in the preceding chapter, are built.

TOWARDS the east, and west parts of the city, but within the walls, are a great many fruit and kitchen gardens; and most of the principal houses have gardens for entertainments, being continually refreshed with water by means of the canals.

THE whole city is divided into the five following parishes. 1. Sagrario, which has three priests. 2. St. Ann, and 3. St. Sebastian, each having two priests. 4. St. Marcelo, and 5. St. Lazaro, each of which has one priest only. The parish of the latter extends itself

self five leagues, namely to the valley of Carabaillo, and to it belong the many large plantations in that space; chapels are therefore erected for celebrating mass on days of precept, that the people may perform their duty without the fatigue and trouble of travelling to Lima. Here are also two chapels of ease, that of St. Salvador in the parish of St. Ann; and that of the orphans, in the Sagrario. There is also in the Cercado, one of the quarters of the town, a parish of Indians, under the care of the Jesuits.

THE convents here are very numerous; four Dominicans, viz. La Casa grande, Recoleccion de la Magdalena, the college of St. Thomas, appropriated to literature, and Santa Rosa. Three of Franciscans, viz. Casa grande, Recoletos de nuestra Senora de los Angeles, or Guadalupe, and Los Descalzos de San Diego, the latter is in the suburb of San Lazaro. Three of the order of Augustin, namely Casa grande; the Seminary of San Ildefonso, a literary college; and the noviciate at Nuestra Senora de Guia. Three also belong to the order of Mercy, namely, the Casa principal, the college of St. Pedro Nolasco, and a Recoleccion, called Bethlehem.

THE Jesuits have six colleges or houses, which are those of St. Paul, their principal college; St. Martin, a college for secular students; St. Anthony, a noviciate; the house of possession, or desamparados, under the invocation of Nuestra Senora de los Dolores; a college in the Cercado, where the Indians are instructed in the precepts of religion; and that of the Chacarilla, appointed for the exercises of St. Ignatius; and accordingly all seculars on their desire to perform them are admitted. They are also allowed the liberty of beginning when most convenient for themselves, and are handsomely entertained by the college during the eight days of their continuance. But it must be observed, that of all these convents, the Casas grandes, are now the most

considerable; the others, besides being small, have but few members, and small revenues.

BESIDES the preceding nineteen convents and colleges, here are also an oratory of St. Philip Neri; a monastery of the order of St. Benedict, with the title of Nuestra Senora de Monferrat, the abbey of which is commonly the only member, and sent from Spain; and though this foundation is one of the most ancient in the whole city, its revenue is hardly sufficient to support any more: a convent called Nuestra Senora de la Buena Muerte, or the order of that name, generally known by the name of Agonizantes. This order founded a hospital in the city, in 1715, under the particular direction of the fathers Juan Mugnos, and Juan Fernandez, who with a lay brother of the same order having in 1736, obtained a license from the council of the Indians, went from Spain and founded a convent of community in every form. In the suburb of St. Lazaro is also a convent of St. Francis de Paula, a modern foundation, under the name of Nuestro Senora del Scorro.

THERE are also in Lima three other charitable foundations, namely St. Juan de Dios, served by the religious of that order, and appropriated to the relief of persons recovering from sickness; and two of Bethlehemites; one of which, being the Casa grande, is without the city, and founded for the relief of sick Indians, who are taken care of in Santa Ana; and the other within the city, called that of the incurables, being appropriated to persons labouring under diseases of that nature. The latter, as we have already observed,* was founded so early as the year 1671. This opulent city has also nine other hospitals, each appropriated to some peculiar charity.

1. San Andres, a royal foundation, admitting only Spaniards.

* Chap. IV. Lib. V. Vol. I.

2. San

2. San Pedro, for poor ecclesiastics.
3. El Espíritu Santo, for mariners, and supported by the ships belonging to these seas, their crews being properly assessed for that purpose.
4. San Bartholome, for the negroes.
5. Senora Santa Ana, for the Indians.
6. San Pedro de Alcantara for women.
7. Another for that use, under the care of the Bethlehemite fathers, erected before their Casa grande.
8. La Caridad also for women.
9. San Lazaro, for the lepers, which with those already enumerated, make twelve.

Here are also 14 nunneries, the number of persons in which would be sufficient to people a small town. The 5 first are regulars, and the other 9 recolects.

1. La Encarnation. 2. La Conception. 3. Santa Cathalina. 4. Santa Clara. 5. La Trinidad. 6. El Carmen. 7. Santa Teresa, ò El Carmen baxo. 8. Las Descalzas de San Joseph. 9. Las capuchinas. 10. Las Nazarenas. 11. Las Mercedarias. 12. Santa Rosa. 13. Las Trinitarias Descalzas. 14. Las Monjas del Prado.

Lastly, here are four other conventual houses, where some few of the sisters are not recluses, tho' most of them observe that rule. These houses are :

1. Santa Rosa de Viterbo. 2. Nuestra Senora del Patrocinio. 3. Nuestra Senora de Capacabana, for Indian ladies. 4. San Joseph.

The last is a retreat for women who desire to be divorced from their husbands. There is also a house constituted in the manner of convents, for poor women, and under the direction of an ecclesiastic appointed by the archbishop, who is also their chaplain.

THE most numerous of all these nunneries, are the Incarnation, Conception, Santa Clara, and Santa Cathalina. The others are indeed not so large ; but the Recolects in the rectitude and austerity of their lives, are an example to the whole city.

HERE is also an orphan-house, divided into two colleges, one for the boys, and the other for the girls : besides several chapels, in different parts of the city ; but the following list will shew at once, the parishes, hospitals, churches and monasteries of Lima ; which was always no less conspicuous with regard to a zeal for religion than for splendor.

LIST of the parishes, convents of each order, hospitals ; nunneries, and conventual houses in Lima.

Parishes 6.

CONVENTS of San Domingo, 4. Of San Frances, 3. Of San Augustin, 3. Of la Merced, 3.

COLLEGES of Jesuits, 6.

ORATORY of St. Philip Neri, 1.

MONASTERY of Benedictins, 1. Of San Francisco de Paula, 1. Of Agonizantes, 1. Of San Juan de Dios, 1. Of Bethlemites, 2.

NUNNERIES of Regulars, 5. Of Recollets, 9.

CONVENTUAL houses, 4. House for poor women, 1. Orphan house, 1. Hospitals, 12.

ALL the churches, both conventual and parochial, and also the chapels, are large, constructed partly of stone, and adorned with paintings and other decorations of great value ; particularly the cathedral, the churches of St. Dominic, St. Francis, St. Augustin, the fathers of Mercy, and that of the Jesuits, are so splendidly decorated, as to surpass description ; an idea being only to be formed by the sight. The riches and pomp of this city, especially on solemn festivals, is astonishing. The altars, from their very bases to the borders of the paintings, are covered with massive silver, wrought into various kinds of ornaments. The walls also of the churches are hung with velvet, or tapestry of equal value, adorned with gold and silver fringes : all which in this country, is remarkably dear ; and on these are splendid pieces of plate in various figures. If the eye be directed from
the

the pillars, walls and ceiling, to the lower part of the church, it is equally dazzled with glittering objects, presenting themselves on all sides; among which are candlesticks of massive silver, six or seven feet high, placed in two rows along the nave of the church; embossed tables of the same metal, supporting smaller candlesticks; and in the intervals betwixt them pedestals on which stand the statues of angels. In fine the whole church is covered with plate, or something equal to it in value; so that divine service, in these churches, is performed with a magnificence scarce to be imagined; and the ornaments, even on common days, with regard to their quantity, and richness, exceed those which many cities of Europe pride themselves with displaying on the most common occasions.

If such immense riches are bestowed on the body of the church, how can imagination itself form an idea of those more immediately used in divine worship, such as the sacred vessels, the chalices, ostensoriums, &c. in the richness of which there is a sort of emulation between the several churches. In these the gold is covered with diamonds, pearls, and precious stones, so as to dazzle the eye of the spectator. The gold and silver stuff for vestments and other decorations, are always of the richest and most valuable among those brought over by the register ships. In fine, whatever is employed in ornamenting the churches, is always the richest of the kind possible to be procured.

THE principal convents are very large, with convenient and airy apartments. Some parts of them, as the outward walls which inclose them, are of unburnt bricks; but the building itself of quinchas or baxareques. The roofs of many are arched with brick, others only with quinchas; but of such curious architecture as entirely to conceal the materials; so that the frontispieces, and principal gates have a majestic appearance. The columns, freizes, statues and cornices

are of wood, finely carved, but so nearly imitating the colour and appearance of stone, as only to be discovered by the touch. This ingenious imitation does not proceed from parsimony, but necessity; in order to avoid as much as possible the dreadful devastations of earthquakes, which will not admit of structures built with ponderous materials.

THE churches are decorated with small cupolas of a very pretty appearance; and though they are all of wood, the sight cannot distinguish them from stone. The towers are of stone from the foundation the height of a toise and a half, or two toises, and from thence to the roof of the church of brick, but the remainder of wood painted of a free-stone colour, terminating in a statue, or image alluding to the name of the church. The height of these may be nearly known from that of St. Dominic, which by a geometrical mensuration we found to be between 50 and 60 yards; a height which tho' small in proportion to the largeness of the structure, is a necessary caution both with regard to the shocks of earthquakes, and the weight of the bells, which in size and number exceed those of Spain, and on a general ringing produce a very agreeable harmony.

ALL the convents are furnished with water from the city, though not from that of the rivulets, which, as we before observed, run through the streets in covered channels; but brought from a spring by means of pipes. While on the other hand, both the monasteries and nunneries are each obliged to maintain a fountain in the street, for the public use of poor people, who have not the conveniency of water in their houses.

THE vice-roys whose power extends over all Peru, usually reside at Lima; but the province and audience of Quito has been lately detached from it; as we have observed in our account of that province. This government is triennial, though at the expiration
of

of that term the sovereign may prolong it. This office is of such importance, that the vice-roy enjoys all the privileges of royalty. He is absolute in all affairs, whether political, military, civil, criminal, or relating to the revenue, having under him offices and tribunals for executing the several branches of government; so that the grandeur of this employment is in every particular equal to the title. For the safety of his person and the dignity of his office, he has two bodies of guards; one of horse, consisting of 160 private men, a captain, and a lieutenant: Their uniform is blue, turn'd up with red, and laced with silver. This troop consists entirely of picked men, and all Spaniards. The captain's post is esteemed very honourable. These do duty at the principal gate of the palace; and when the vice-roy goes abroad, he is attended by a piquet guard consisting of eight of these troopers. The 2d is that of the halbadiers, consisting of 50 men, all Spaniards; dressed in a blue uniform, and crimson velvet waistcoats laced with gold. These do duty in the rooms leading to the chamber of audience, and private apartments. They also attend the vice-roy when he appears in public, or visits the offices, and tribunals. The only officer of this body is a captain, whose post is also reckoned very eminent. Both captains are nominated by the vice-roy. Besides these there is another guard within the palace, consisting of 100 private men, a captain, lieutenant and sub-lieutenant; being a detachment from the garrison of Callao. These are occasionally employed in executing the governour's orders, and the decrees of the tribunals, after they have received the sanction of his assent.

THE vice-roy, besides assisting at the courts of justice, and the councils relating both to the finances and war, gives every day public audience to all sorts of persons; for which purpose there are in the palace, three very grand and spacious rooms. In the first,

first, which is adorned with the portraits of all the vice-roys, he receives the Indians and other casts. In the second, he gives audience to the Spaniards; and in the third, where, under a rich canopy are placed the pictures of the king and queen then reigning, he receives those ladies who desire to speak to him in private without being known.

THE affairs relating to the government are expedited by a secretary of state, with an assistant, properly qualified for such an arduous post. From this office are issued the orders for passports which must be had from every Corregidor in his jurisdiction. The secretary has also the power of filling all juridical employments as they become vacant, for the term of two years; as also those of the magistracy, who at the expiration of their term, have not been replaced by others of his majesty's nomination. In a word this office may be said to be the channel by which all affairs relating both to war and government are transacted.

ALL causes relating to justice, are tried in the court called the *Audiencia*, from the decrees of which there is no appeal to the supreme council of the Indies, unless after notorious injustice or a second trial; as the vice-roy himself presides in it. The Audiencia which is the chief court at Lima, is composed of 8 auditors or judges, and a fiscal, for civil causes. This court is held in the vice-roy's palace, in the 3 saloons appropriated to it. In one the deliberations are held, and in the other two, the causes are tried either publickly or privately, the senior judge always presiding. Criminal causes are tried in a 4th apartment, the judges being 4 Alcaldes of the court, and a criminal fiscal. There is also a fiscal protector of the Indians, and some supernumeraries.

NEXT to the tribunal of audience, is the chamber of accounts, consisting of a commissioner, five chief accomptants, two receivers, and two directors, with
other

other inferior officers belonging to each class. Here all Corregidores, intrusted to collect the revenue, pass their accounts. Here also the distributions and managements of the royal revenue are regulated.

LASTLY, the royal treasury, under a treasurer, accomptant, and agent, who have the superintendence of all his majesty's revenue of what kind soever; since whatever revenue arises from the other parts of this province is remitted to Lima as the capital of the kingdom.

THE corporation of Lima, consists of regidores or aldermen, an alferrez real, or sheriff; and two alcaldes, or royal judges; all being noblemen of the first distinction in the city. These have the direction of the police, and the ordinary administration of justice. The alcaldes preside alternately every month; for by a particular privilege of this city, the jurisdiction of its corregidor extends only to the Indians.

HERE is a court for the effects of deceased persons, which takes cognizance of the goods of those dying intestate, and without lawful heir; and likewise of those entrusted with the effects of other persons. It consists of a judge, who is generally one of the auditors, a counsellor, and an accomptant.

THE next tribunal is that of commerce, or the Consulado. Its principal officers are a president and two consuls. All who are entered in the list of merchants are members of it, and have a vote in the choice of these officers, who, with an assessor, decide all commercial disputes and processes, by the same rules as the consulados at Cadiz and Bilbao.

LIMA has also a corregidor, whose jurisdiction extends to all Indians both within the city and five leagues round it. The principal places in this jurisdiction are Surco, Los Chorrillos, Miraflores, la Magdalena, Lurigancho, Late, Pachacama, and Lurin, together with the Indian inhabitants of the two suburbs of Callao, called new and old Pitipiti. The
infinite

infinite number of Indians who inhabited this valley before and at the time of the conquest, are now reduced to the few inhabitants of the abovementioned places ; and have only two Casiques, namely those of Miraflores and Sureo, and these in such low circumstances as to teach music at Lima for subsistence.

THE cathedral chapter, besides the archbishop, consists of the dean, archdeacon, chanter, treasurer, and rector, four canons by suffrage, five by presentation, six prebendaries, and six semi-prebendaries ; but the ecclesiastical tribunal consists only of the archbishop and his chancellor. His suffragans are the bishops of Panama, Quito, Truxillo, Guamanga, Arequipa, Cuzco, St. Jago, and Conception ; the two last are in the kingdom of Chili.

THE tribunal of inquisition consists of two inquisitors, and a fiscal, who like the subordinate officers, are nominated by the inquisitor general ; and in case of a vacancy, filled up by the supreme council of the inquisition.

THE tribunal of the Cruzada, is conducted by a sub-delegate commissary, an accomptant, and treasurer, with other inferior officers. But the dean, or senior judge of the audience, generally assists at its deliberations.

LASTLY, here is also a mint with its proper officers, where the gold and silver are coined.

IN the university and colleges, the happy geniuses of the natives are improved by divine and human learning, and as we shall shew in the sequel, soon give elegant specimens of their future acquisitions. They are in this much more indebted to nature than either to art or their own application ; and if they do not equally distinguish themselves in other studies, it is not from want of talents, but of proper persons to instruct them in the necessary elements. For by their ready comprehension of whatever is taught them, we may conclude, that their abilities are

are equal to other improvements. The chief of these seminaries is the university of St. Mark, and the colleges of St. Toribio, St. Martin, and St. Philip. In the former are chairs for all the sciences, and filled by suffrage; a method always favourable for persons of learning and understanding. Some of these professors, have, notwithstanding the vast distance, gained the applause of the literati of Europe.

The university makes a stately appearance without, and its inside is decorated with suitable ornaments. It has a large square court, with a handsome vaulted piazza round it. Along the sides are the halls, where lectures are read; and in one of its angles is the theatre for the public acts, adorned with the portraits of the several great men who had their education in this seat of learning, in frames finely ornamented with sculpture, and richly gilded; as are also the two rows of seats which extend entirely round the theatre.

FROM what has been said it sufficiently appears, that Lima is not only large, magnificent, and distinguished, as the capital of the kingdom, by the residence of the vice-roy, and the superior courts and offices, but also that it has an acknowledged superiority over the other cities in these parts, from the public nurseries erected for the advancement of learning and the sciences.

THE richness of the churches, and the splendor with which divine service is performed, we have already described. The magnificence of its inhabitants and of its public solemnities are proportional, and displayed with a dignity peculiar to minds inflamed with a desire of honour, and who value themselves on celebrating the principal solemnities in a manner, which distinguishes Lima from the other cities of its kingdom: Tho' the latter are not wanting in their endeavours to vie with their capital.

OF all the solemnities observed in America, the
public

public entrance of the vice-roy, is the most splendid ; and in which the amazing pomp of Lima is particularly displayed. Nothing is seen but rich coaches and calasnes, laces, jewels, and splendid equipages, in which the nobility, carry their emulation to an astonishing height. In a word this ceremony is so remarkable, that I flatter myself the reader will not be displeased at the description.

CHAP. IV.

Of the public Entrance of the Vice-Roy at LIMA ; his Reception, and the chief annual Solemnities.

ON the landing of the vice-roy at Païta, two hundred and four leagues from Lima, he sends a person of great distinction, generally some officer of his retinue, to Lima, with the character of an ambassador ; and, by a memoir, informs his predecessor of his arrival, in conformity to his majesty's orders, who had been pleased to confer on him the government of that kingdom. On this Ambassador's arrival at Lima, the late vice-roy sends a messenger to compliment him on his safe arrival ; and on dismissing the ambassador, presents him with some jewel of great value, and a jurisdiction or two which happen at that time to be vacant, together with an indulgence of officiating by deputy, if most agreeable to him. The corregidor of Piura receives the new vice-roy at Païta, and provides litters, mules, and every other necessary for the vice roy and his retinue, as far as the next jurisdiction. He also orders booths to be built at the halting places in the desarts ; attends him in person, and defrays all the expences, till relieved by the next corregidor. Being at length arrived at Lima, he proceeds, as it were incognito through

through the city to Callao, about two leagues and a half distant. In this place he is received and acknowledged by one of the ordinary alcaldes of Lima, appointed for that purpose, and also by the military officers. He is lodged in the vice-roy's palace, which, on this occasion, is adorned with astonishing magnificence. The next day, all the courts, secular and ecclesiastical, wait on him from Lima, and he receives them under a canopy in the following order. The audiencia, the chamber of accounts, the cathedral chapter, the magistracy, the consulado, the inquisition, the tribunal de Cruzada, the superiors of the religious orders, the colleges, and other persons of eminence. On this day the judges attend the vice-roy to an entertainment given by the Alcalde; and all persons of note take a pride in doing the like to his attendants. At night there is a play, to which the ladies are admitted veiled, and in their usual dress, to see the new vice-roy.

THE second day after his arrival at Callao, he goes in a coach provided for him by the city, to the chapel de la Legua, so called from its being about half-way between Callao and Lima, where he is met by the late vice-roy, and both alighting from their coaches, the latter delivers to him a truncheon as the ensign of the government of the kingdom. After this, and the usual compliments, they separate.

If the new vice-roy intends to make his public entry into Lima, in a few days he returns to Callao, where he stays till the day appointed; but as a longer space is generally allowed for the many preparatives necessary to such a ceremony, he continues his journey to Lima, and takes up his residence in his palace, the fitting up of which on this occasion, is committed to the junior auditor, and the ordinary alcalde.

ON the day of public entry, the streets are cleaned, and hung with tapestry, and magnificent triumphal arches erected at proper distances. At two in the

afternoon the vice-roy goes privately to the church belonging to the monastery of Monferrat, which is separated by an arch and a gate from the street, where the cavalcade is to begin. As soon as all who are to assist in the procession are assembled, the vice-roy and his retinue mount on horses, provided by the city for this ceremony, and the gates being thrown open, the procession begins in the following order.

THE militia; the colleges; the university with the professors in their proper habits; the chamber of accounts; the audience on horses with trappings; the magistracy, in crimson velvet robes, lined with brocade of the same colour, and a particular kind of caps on their heads, a dress only used on this occasion. Some members of the corporation who walk on foot, support the canopy over the vice-roy, and the two ordinary alcaldes, which are in the same dress, and walk in the procession, act as equerries, holding the bridle of his horse. This part of the ceremony, tho' prohibited by the laws of the Indians, is still performed in the manner I have described; for the custom being of great antiquity, the magistrates have not thought proper to alter it, that the respect to the vice-roy might not suffer any diminution, and no person has yet ventured to be the first in refusing to comply with it.

THIS procession is of considerable length, the vice-roy passing through several streets till he comes to the great square, in which the whole company draw up facing the cathedral, where he alights, and is received by the archbishop and chapter. Te Deum is then sung before the vice-roy, and the officers placed in their respective seats; after which he again mounts his horse and proceeds to the palace-gate, where he is received by the Audiencia, and conducted to an apartment in which a splendid collation is provided, as are also others for the nobility in the anti-chambers.

ON the morning of the following day, he returns

to the cathedral in his coach, with the retinue and pomp usual on solemn festivals, and public ceremonies. He is preceded by the whole troop of horse-guards, the members of the several tribunals in their coaches, and after them the vice-roy himself with his family, the company of halbadiers bringing up the rear. On this occasion all the riches and ornaments of the church are displayed, the archbishop celebrates in his pontifical robes, the mass of thanksgiving; and the sermon is preached by one of the best orators of the chapter. From hence the vice-roy returns to the palace attended by all the nobility, who omit nothing to make a splendid figure on these occasions. In the evening of this, and the two following days, the collations are repeated, with all the plenty and delicacy imaginable. To increase the festivity, all women of credit have free access to the halls, galleries, and gardens of the palace, when they are fond of shewing the dispositions of their genius, either by the vivacity of repartees, or spirited conversations, in which they often silence strangers of a very ready wit.

THIS shew and ceremony is succeeded by bull feasts at the city's expence, which continue five days. The three first for the vice-roy, and the two latter in compliment to the ambassador who brought advice of his arrival, and the great honour conferred on him by the sovereign in the government of this kingdom.

THIS ambassador, who, as I before observed, is always a person of eminent quality, makes also a public entrance into Lima on horseback on the day of his arrival, and the nobility being informed of his approach, go out to receive and conduct him to the palace, from whence they carry him to the lodgings prepared for him. This ceremony used to be immediately followed by feasts and public diversions; but in order to avoid that inconvenience, just when the city is every where busied in preparing for the reception of the vice-roy, they are deferred, and given

at one and the same time as above recited.

THE bull-feasts are succeeded by that ceremony, in which the university, the colleges, the convents and nunneries acknowledge him as their vice-royal protector. This is also accompanied with great splendor; and valuable prizes are bestowed on those who make the most ingenious compositions in his praise. These ceremonies, which greatly heighten the magnificence of this city, are so little known in Europe, that I shall be excused for enlarging on them.

THEY are begun by the university, and the rector prepares a poetical contest, adapted to display either the wit or learning of the competitors. After publishing the themes, and the prizes to be given to those who best handle the subject they have chosen, he waits on the vice-roy to know when he will be pleased to honour the university with his presence; and, the time being fixed, every part of the principal court is adorned with the utmost magnificence. The prizes which are placed in order distinguish themselves by their richness, while the pillars and columns are hung with emblematical devices, or pertinent apothegms on polished shields, surrounded by the most beautiful mouldings.

THE reception is in the following order. On the vice-roy's entering the court he is conducted to the rectoral chair, which, on this occasion, glitters with the magnificence of an eastern throne. Opposite to it sits the rector, or, in his absence, one of the most eminent members of that learned body, who makes a speech, in which he expresses the satisfaction the whole university feels 'in such a patron. After this the vice-roy returns to his palace, where, the day following, the rector presents him with a book, containing the poetical contest, bound in velvet, and plated at the corners with gold, accompanied with some elegant piece of furniture, whose value is never less than eight hundred or a thousand crowns.

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THE principal end of the university in this ceremony being to ingratiate itself with the vice-roy and his family, the rector contrives that the poetical pieces which gain the prizes, be made in the name of the principal persons of his family, and accordingly the most distinguished prizes are presented to them; and there being 12 subjects in the contest, there are three prizes for each, of which the two inferior fall to those members, whose compositions are most approved of. These prizes are pieces of plate, valuable both for their weight and workmanship.

THE university is followed by the colleges of St. Philip and St. Martin, with the same ceremonies, except the poetical contest.

NEXT follow the religious orders, according to the antiquity of their foundation in the Indies. These present to the vice-roy the best theses maintained by students at the public acts.

THE vice-roy is present at them all, and each disputant pays him some elegant compliment, before he enters on his subject.

THE superiors of the nunneries send him their congratulatory compliments, and when he is pleased in return to visit them, they entertain him with a very fine concert of musick, of which the vocal parts are truly charming; and at his retiring they present him with some of the chief curiosities which their respective institutes allow to be made by them.

BESIDES these festivities and ceremonies, which are indeed the most remarkable; there are also others, some of which are annual, in which the riches and liberality of the inhabitants are no less conspicuous. Particularly on New Year's Day, at the election of Alcaldes, who being afterwards confirmed by the vice-roy, appear publicly on horse-back the same evening, and ride on each side of him, in very magnificent habits ornamented with jewels, and the furniture of their horses perfectly answerable. This

cavalcade is very pompous, being preceded by the two companies of horse-guards, the halbadiers, followed by the members of the tribunals in their coaches, the vice-roy's retinue, and the nobility of both sexes.

ON twelfth day in the morning, and the preceding evening, the vice-roy rides on horseback thro' the town, with the royal standard carried in great pomp before him. This is performed in commemoration of the building of the city, which, as we have already observed, was begun on this day; solemn vespers are sung in the cathedral, and a mass celebrated; and the ceremony is concluded with a cavalcade, like that on new year's day.

THE Alcaldes chosen for the current year, give public entertainments in their houses, each three nights successively; but that the feasts of one might not interfere with those of another, and occasion resentments, they agree for one to hold his feasts the three days immediately succeeding the election, and the other on twelfth day and the two following. Thus each has a greater number of guests, and the entertainments are more splendid and sumptuous. The other feasts in the course of the year, are not inferior to these either with regard to numbers or expence; at least the number of them must excite a high idea of the wealth and magnificence of Lima.

CHAP. V.

Of the Inhabitants of LIMA.

HAVING, in our accounts of several towns thro' which we passed to Lima, included also the inhabitants, we shall observe the same rule with regard to Lima; for though amidst such an infinite variety of customs, there is always some resemblance
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between those of neighbouring people, yet the difference is also considerable, and no where more so than on this continent, where it doubtless arises from the great distance between the several towns; and, consequently, I may say, from the different genius's and dispositions of the people. And though Lima is the capital of the country, it will appear that it is not a model to other places, with regard to dress, customs, and manner of living.

THE inhabitants of Lima are composed of whites, or Spaniards, Negroes, Indians, Mestizos, and other casts, proceeding from the mixture of all three.

THE Spanish families are very numerous; Lima according to the lowest computation, containing sixteen or eighteen thousand whites. Among these are reckoned a third or fourth part of the most distinguished nobility of Peru; and many of these dignified with the stile of ancient or modern Castilians, among which are no less than 45 counts and marquises. The number of knights belonging to the several military orders is also very considerable. Besides these are many families no less respectable and living in equal splendor; particularly 24 gentlemen of large estates, but without titles, tho' most of them have ancient seats, a proof of the antiquity of their families. One of these traces, with undeniable certainty, his descent from the Yncas. The name of this family is Ampuero, so called from one of the Spanish commanders at the conquest of this country, who married a Coya, or daughter of the Ynca. To this family the kings of Spain have been pleased to grant several distinguishing honours and privileges, as marks of its great quality: and many of the most eminent families in the city have desired intermarriages with it. All those families live in a manner becoming their rank, having estates equal to their generous dispositions, keeping a great number of slaves

and other domestics, and those who affect making the greatest figure, have coaches, while others content themselves with calashes or chaises, which are here so common, that no family of any substance is without one. It must be owned that these carriages are more necessary here than in other cities, on account of the numberless droves of mules which continually pass thro' Lima, and cover the streets with their dung, which being soon dried by the sun and the wind, turns to a nauseous dust, scarce supportable to those who walk on foot. These chaises, which are drawn by a mule; and guided by a driver, have only two wheels, with two seats opposite to each other, so that on occasion they will hold four persons. They are very slight and airy; but on account of the gildings and other decorations, sometimes cost eight hundred or a thousand crowns. The number of them is said to amount to 5 or 6000; and that of coaches is also very considerable, tho' not equal to the former. The funds to support these expences, which in other parts would ruin families, are their large estates and plantations, civil and military employments or commerce, which is here accounted no derogation to families of the greatest distinction; but by this commerce is not to be understood the buying and selling by retail, or in shops, every one trading proportional to his character and substance. Hence families are preserved from those disasters too common in Spain, where titles are frequently found without a fortune capable of supporting their dignity. Commerce is so far from being considered as a disgrace at Lima, that the greatest fortunes have been raised by it; those, on the contrary, being rather despised, who not being blessed with a sufficient estate, through indolence, neglect to have recourse to it for improving their fortunes. This custom, or resource, which was established there without any determinate end, being introduced by a vain desire of the first Spaniards

Spaniards to acquire wealth, is now the real support of that splendor in which those families live; and whatever repugnance these military gentlemen might originally have to commerce, it was immediately removed by a royal proclamation, by which it was declared that commerce in the Indies should not exclude from nobility or the military orders; a very wise measure, and of which Spain would be still more sensible, were it extended to all its dependencies.

AT Lima, as at Quito, and all Spanish America, some of the eminent families have been long since settled there, whilst the prosperity of others is of a later date; for being the center of the whole commerce of Peru, a greater number of Europeans resort to it, than to any other city; some for trade, and others, from being invested in Spain with considerable employments: among both are persons of the greatest merit; and tho' many after they have finished their respective affairs, return home, yet the major part, induced by the fertility of the soil, and goodness of the climate, remain at Lima, and marry young ladies remarkable equally for the gifts of fortune as those of nature; and thus new families are continually settled.

THE Negroes, Mulattoes, and their descendants, form the greater number of the inhabitants; and of these are the greatest part of the mechanics; tho' here the Europeans also follow the same occupations, which are not at Lima reckoned disgraceful to them, as they are at Quito; for gain being here the universal passion, the inhabitants pursue it by means of any trade, without regard to its being followed by Mulattoes, interest here preponderating against any other consideration.

THE third, and last class of inhabitants are the Indians and Mestizos, but these are very small in proportion to the largeness of the city, and the multitudes of the second class. They are employed in

agriculture, in making earthen ware, and bringing all kinds of provisions to market, domestick services being performed by Negroes and Mulattoes, either slaves or free, though generally by the former.

THE usual dress of the men differs very little from that worn in Spain, nor is the distinction between the several classes very great; for the use of all sorts of cloth being allowed, every one wears what he can purchase. So that it is not uncommon to see a Mulatto, or any other mechanic dressed in a tissue, equal to any thing that can be worn by a more opulent person. They all greatly affect fine cloaths, and it may be said without exaggeration, that the finest stuffs made in countries, where industry is always inventing something new, are more generally seen at Lima than in any other place; vanity and ostentation not being restrained by custom or law. Thus the great quantities brought in the galleons and register ships, notwithstanding they sell here prodigiously above their prime cost in Europe, the richest of them are used as cloaths, and worn with a carelessness little suitable to their extravagant price; but in this article the men are greatly exceeded by the women, whose passion for dress is such as to deserve a more particular account.

In the choice of laces, the women carry their taste to a prodigious excess; nor is this an emulation confin'd to persons of quality, but has spread thro' all ranks, except the lowest class of negroes. The laces are sewed to their linen, which is of the finest sort, though very little of it is seen, the greatest part of it, especially in some dresses, being always covered with lace; so that the little which appears seems rather for ornament than use. These laces too must be all of Flanders manufacture, no woman of rank condescending to look on any other.

THEIR dress is very different from the European, which the custom of the country alone can render excusable;

excusable; indeed to Spaniards at their first coming over it appears extremely indecent. Their dress consists of a pair of shoes, a shift, a petticoat of dimity, an open petticoat, and a jacket, which in summer, is of linen, in winter of stuff. To this some add a mantelette, that the former may hang loose. The difference between this dress and that worn at Quito, though consisting of the same pieces is, that at Lima it is much shorter, the petticoat which is usually tied below the waist, not reaching lower than the calf of the leg, from whence, nearly to the ankle, hangs a border of very fine lace, sewed to the bottom of the under petticoat; through which the ends of their garters are discovered, embroidered with gold or silver, and sometimes set with pearls; but the latter is not common. The upper petticoat, which is of velvet, or some rich stuff, is fringed all round, and not less crowded with ornaments, than those described in the first volume of this work. But be the ornaments what they will, whether of fringe, lace, or ribbands, they are always exquisitely fine. The shift sleeves, which are a yard and a half in length, and two yards in width, when worn for ornament, are covered with rolls of laces, variegated in such a manner as to render the whole truly elegant. Over the shift is worn the jacket, the sleeves of which are excessively large, of a circular figure, and consist of rows of lace, or slips of cambric or lawn, with lace disposed betwixt each, as are also the shift sleeves, even of those who do not affect extraordinary ornament. The body of the jacket is tied on the shoulders with ribbands fastened to the back of their stays; and the round sleeves of it being tucked up to the shoulders, are so disposed together with those of the shift, as to form what may be term'd four wings. If the jacket be not buttoned or clasped before; it is agreeably fastened on the shoulders; and indeed the whole dress makes

a most elegant figure. They who use a close vest, fasten it with clasps, but wear over it the loose jacket, already described. In the summer they have a kind of veil, the stuff and fashion of which is like that of the shift and body of the vest, of the finest cambrick or lawn, richly laced: But in winter the veil worn in their houses is of bays; when they go abroad full dressed, it is adorned like the sleeves. They also use brown bays, finely laced and fringed, and bordered with slips of black velvet. Over the petticoat is an apron of the same stuff as the sleeves of the jacket, hanging down to the bottom of it. From hence some idea may be formed of the expence of a dress, where the much greater part of the stuff is merely for ornament; nor will it appear strange, that the marriage shift should cost a thousand crowns, and sometimes more.

ONE particular on which the women here extremely value themselves, is the size of their feet, a small foot being esteemed one of the chief beauties; and this is the principal fault they find with the Spanish ladies, who have much larger feet than those of Lima. From their infancy they are accustomed to wear straight shoes, that their feet may not grow beyond the size of which they esteem beautiful; some of them do not exceed five inches and a half, or six inches in length, and in women of a small stature they are still less. Their shoes have little or no sole, one piece of Cordovan serving both for that and the upper leather, and of an equal breadth and roundness at the toe and heel, so as to form a sort of long figure of eight; but the foot not complying with this figure, brings it to a greater regularity. These shoes are always fastened with diamond buckles, or something very brilliant in proportion to the ability of the wearer, being worn less for use than ornament; for the shoes are made in such a manner, that they never loosen of themselves, nor do the
buckles

buckles hinder their being taking off. It is unusual to set these buckles with pearls, a particular to be accounted for, only from their being so lavish of them in the other ornaments of dress, as to consider them as of too little value. The shoemakers, who are no strangers to the foible of the sex, take great care to make them in a manner very little calculated for service. The usual price is three half crowns a pair; those embroidered with gold or silver cost from eight to ten crowns. The latter however, are but little worn, the encumbrance of embroidery being suited rather to enlarge than diminish the appearance of a small foot.

THEY are fond of white silk stockings, made extremely thin, that the leg may appear the more shapely; the greatest part of which is exposed to view. These trifles often afford very sprightly sallies of wit in their animadversions on the dress of others.

HITHERTO we have considered only the more common dress of these ladies; the reader will conceive a still higher idea of their magnificence, when he is informed of the ornaments with which they are decorated in their visits, and upon public occasions. We shall begin with their manner of dressing the hair, which being naturally black, and capable of reaching below their waists, they dispose in such a manner as to appear perfectly graceful. They tie it up behind in six braided locks, through which a golden bodkin a little bent is inserted, and having a cluster of diamonds at each end. On this the locks are suspended so as to touch the shoulder. On the front and upper part of the head they wear diamond egrets, and the hair is formed into little curls, hanging from the forehead to the middle of the ear, with a large black patch of velvet on each temple. Their ear-rings are of brilliants, intermixed with tufts of black silk, covered with pearls, resembling those already
ready

ready described in the first volume. These are so common an ornament, that besides their necklaces, they also wear about their neck rosaries, the beads of which are of pearls, either separate or set in clusters to the size of a large filbert; and those which form the cross are still larger.

BESIDES diamond rings, necklaces, girdles, and bracelets, all very curious both with regard to water and size, many ladies wear other jewels set in gold, or for singularity sake, in tombago. Lastly, from their girdle before is suspended a large round jewel enriched with diamonds; much more superb than their bracelets, or other ornaments. A lady covered with the most expensive lace instead of linen, and glittering from head to foot with jewels, is supposed to be dress'd at the expence of not less than thirty or forty thousand crowns. A splendor still the more astonishing, as it is so very common.

A fondness for expence in these people, does not confine itself to rich apparel; it appears no less in the strange neglect, and the small value they seem to set upon them, by wearing them in a manner the most careless, and by that means bringing upon themselves fresh expences in repairing the old or purchasing new jewels; especially pearls on account of their fragility.

THE most common of the two kinds of dresses worn when they go abroad, is the veil and long petticoat; the other is a round petticoat and mantelet. The former for church, the latter for taking the air, and diversions; but both in the prevailing taste for expence, being richly embroidered with silver or gold.

THE long petticoat is particularly worn on holy Thursday; as on that day they visit the churches, attended by two or three female negro or mulatto slaves, dressed in an uniform like pages.

WITH regard to the persons of the women of Lima, they are, in general, of a middling stature, handsome,

handsome, genteel, and of very fair complexions without the help of art ; the beauty of their hair, has been already mentioned, but they have usually an enchanting lustre and dignity in their eyes.

THESE personal charms are heightened by those of the mind, clear and comprehensive intellects, an easiness of behaviour, so well tempered, that whilst it invites love, it commands respect ; the charms of their conversation are beyond expression ; their ideas just, their expressions pure, their manner inimitably graceful. These are the allurements by which great numbers of Europeans, forgetting the fair prospects they have at home, are induced to marry and settle here.

ONE material objection against them is, that being too well acquainted with their own excellencies, they are tainted with a haughtiness, which will scarce stoop to the will of their husbands. Yet by their address and insinuating compliance, they so far gain the ascendancy over them, as to be left to their own discretion. There may indeed, a few exceptions be found ; but these possibly are rather owing to a want of capacity. Another objection may be made to their being more expensive than other ladies : but this arises from the exorbitant price of stuffs, laces, and other commodities, in this country. And with regard to the independence they affect, it is no more than a custom long established in the country. To which may be added, that being natives, and their husbands generally foreigners, it is very natural, that the latter should not enjoy all that authority, founded on laws superior to custom ; and hence this error remains uncorrected. The husbands conform to the manners of the country, as their character is not in the least affected thereby ; and this complaisance is rewarded by the discretion and affection of their ladies, which are not to be paralleled in any other part of the world.

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THEY are so excessively fond of perfumes, that they always carry ambergris about them; putting it behind their ears, and other parts of the body; and also in several parts of their cloaths. Not content with the natural fragrancy of flowers, which are also a favourite ornament; they scatter perfumes even on their nosegays. The most beautiful flowers they place in their hair, and others, which are most valuable for their odour they stick in their sleeves; the effluvia therefore issuing from these ladies, the reader will conceive to reach to no inconsiderable distance. The flower most in use is the Chirimoya, of mean appearance, but of exquisite scent.

To this passion for flowers it is owing, that the grand square, every morning, on account of the vast quantity of beautiful vegetables brought thither, has the appearance of a spacious garden. The smell and the sight are there sufficiently gratified. The ladies resort thither in their calashes, and if their fancy happens to be pleased, they make but little difficulty with regard to the price. A stranger has the pleasure of seeing assembled here not only the ladies, but every body of rank whose health and avocations will admit of it.

THE lower classes of women even to the very negroes, affect, according to their abilities, to imitate their betters, not only in the fashion of their dress, but also in the richness of it. None here are seen without shoes as at Quito, but they are made of so small a size, in order to diminish the natural bigness of the feet, that they must give infinite uneasiness in the wearing. A desire of being distinguished by an elegant dress is universal. Their linen is always starch'd to a great degree, in order to display the costly patterns of their laces. After this universal passion, their next care, and indeed a much more commendable one, is cleanliness; of which the un-

common

common neatness of their houses are sufficient instances.

THEY are naturally gay, sprightly, and jocular, without levity; remarkably fond of music; so that even among the lowest you are entertained with pleasing and agreeable songs; for the gratification of this passion, they have in general good voices, and some of them are heard with admiration. They are very fond of balls, where they distinguish themselves equally by the gracefulness and agility of their motions. In fine, the reigning passions of the fair at Lima, are shew, mirth, and festivity.

THE natural vivacity and penetration of the inhabitants of Lima, both men and women, are greatly improved by conversing with persons of learning resorting thither from Spain. The custom of forming small assemblies, has also a great tendency to improve their minds, and give them a ready and happy manner of expression, from an emulation to distinguish themselves in these engaging accomplishments.

THO' the natives have too great a share of pride, they are not wanting in docility when proper methods are taken. They instantly shew their reluctance to obey a command given with haughtiness; but, when delivered with mildness and affability, equally obsequious and submissive. They are charmed with gentleness of manners; and a few instances of kindness make a lasting impression on their minds. They are remarkably brave, and of such unblemished honour, as never to dissemble an affront received, or give one to others; so that they live together in a cheerful and social manner. The Mulattoes being less civilized, and having but slender notions of the turpitude of vice, and the importance of virtue, are haughty, turbulent and quarrelsome. Yet the mischievous consequences of these vices are less

less common, than might naturally be expected in such a populous city.

THE manners and dispositions of the nobility, correspond with their rank and fortune. Courtesy shines in all their actions, and their complaisance to strangers is without limits. The reception they give them, is equally free from flattery and a haughty reserve; so that all the Europeans, whether they visit them out of curiosity or from commercial motives, are charmed with their probity, politeness, candour, and magnificence.

CHAP. VI.

Of the Climate of the City of LIMA and the whole Country of VALLES: And the divisions of the seasons.

THE temperature of the air of Lima, and its alterations, would be greatly injured, by an inference drawn from what is felt in the same degree of north latitude; as Lima would from thence be concluded another Carthagena; the latitude of both cities, one in the northern and the other in the southern hemisphere, differing but very little; whereas in fact it is quite the reverse. For as that of Carthagena is hot to a degree of inconvenience, this of Lima is perfectly agreeable. And tho' the difference of the four seasons are sensible, all of them are moderate, and none of them troublesome.

SPRING begins towards the close of the year, that is, towards the end of November, or beginning of December. But is to be understood only of the heavens, as then the vapours which filled the atmosphere during the winter subside; the sun to the
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great joy of the inhabitants again appears, and the country now begins to revive, which during the absence of his rays had continued in a state of languor. This is succeeded by summer, which, tho' hot from the perpendicular direction of the sun's rays, is far from being insupportable; the heat, which would indeed otherwise be excessive, being moderated by the south-winds, which at this season always blow, tho' with no great force. At the latter end of June, or the beginning of July, the winter begins, and continues till November or December, the autumn intervening between both. About this time the south winds begin to blow stronger, and bring the cold with them; not indeed equal to that in countries where snow and ice are known, but so keen that the light dresses are laid by, and cloth or other warm stuffs worn.

THERE are two causes of the cold felt in this country, and nature, wise in all her ways, provides others which produce the same effect at Quito. The first cause of cold at Lima is the winds, which passing over the frozen climes of the south pole, bring hither part of the frigorific particles from those gelid regions; but as a sufficient quantity of these could not be brought over such an immense space as lies between the frozen and torrid zones of its hemisphere, nature has provided another expedient: during the winter, the earth is covered with so thick a fog, as totally to intercept the rays of the sun; and the winds, by being propagated under the shelter of this fog, retain the particles they contracted in the frozen zone. Nor is this fog confined to the country of Lima, it extends, with the same density, northward thro' all the country of Valles, at the same time filling the atmosphere of the sea; as will be shewn hereafter.

THIS fog seldom fails daily to cover the earth, with a density that obscures objects at any distance:

About 10 or 11 it begins to rise, but without being totally dispersed, tho' it is then no impediment to the sight, intercepting only the rays of the sun by day, and by night those of the stars; the sky being continually covered whatever height the vapours float at in the atmosphere. Sometimes, indeed, they are so far dispersed as to admit of seeing the disk of the sun, but still precluding the heat of his rays.

It is not unworthy observation on this head, that at the distance only of two or three leagues, the vapours are much more dissipated from noon to evening than in the city, the sun fully appearing so as to moderate the coldness of the air. Also at Callao, which is only two leagues and a half from Lima, the winter is much more mild, and the air clearer, during that season, for the days at Lima, are very melancholy and disagreeable, not only on account of the darkness, but frequently during the whole day the vapours continue in the same degree of density and position, without breaking, or being elevated above the earth.

It is in this season only that the vapours dissolve into a very small mist or dew, which they call garua, and thus every where equally moistens the earth; by which means all those hills, which during the other part of the year offer nothing to the sight but rocks and wastes, are clothed with verdure, and enamelled with flowers of the most beautiful colours, to the great joy of the inhabitants, who, as soon as the severity of winter is abated, resort into the country, which exhibits so elegant an appearance. These garuas or dews never fall in quantities sufficient to damage the roads, or incommode the traveller; a very thin stuff will not soon be wet thro'; but the continuance of the mists during the whole winter without being exhaled by the sun, renders the most arid and barren parts fertile. For the same reason they turn
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the disagreeable dust in the streets of Lima into a mud, which is rather more offensive.

THE winds which prevail during the winter, are nearly, though not exactly south; sometimes shifting a little to the S. E. between which and the south they always blow. This we observed to have constantly happened during the two winters we spent in this country, one at Lima, and the other at Callao; The former in the year 1742, and the latter in 1743. The first was one of the most severe that had been felt, and the cold general in all that part of America to Cape Horn. In Chili, Baldivia, and Chiloe, the cold was proportionable to the latitudes; and at Lima it occasioned constipations and fluxions, which swept away such numbers, that it seemed to resemble a pestilence. And tho' disorders of this kind are very common in the winter season, they are rarely attended with the danger which then accompanied them.

THE extraordinary singularity observed in the kingdom of Peru, namely, that it never rains; or to speak more properly, that the clouds do not convert themselves into formal showers, has induced many naturalists to enquire into the cause; but in their solutions of this difficulty they have varied, and invented several hypotheses to account for so strange an effect. Some attribute it to the constancy of the south winds, concluding, that as they are incessant, they propel the vapours rising from the sea, to the same point; and thus by never resting in any part, as no opposite winds blow during the whole year to check their course, there is not time sufficient for the mists to collect themselves, and, by an increase of gravity to descend in the manner of rain. Others have attributed it to the natural cold brought by the south wind, which continue the atmosphere in a certain degree of heat during the whole year, and thus increase the magnitude of the particles of the air,

which with the nitrous effluvia acquired in its passage over the surface of the sea, together with those of the several minerals with which this country abounds, lessen its velocity, and consequently its power of uniting the vapours so as to form drops, whose gravity is greater than that of the air. To this we may add, that the rays of the sun not exerting a force sufficient for uniting and putting them in motion, the heat being greatly lessened by the coldness of the wind, the fog cannot be converted into drops of rain. For while the weight of the cloud does not exceed that of the air, by which it is supported, it cannot precipitate.

I SHALL not censure this, or any other hypothesis, formed for explaining the above phænomenon, not being certain that I have myself discovered the true cause; I shall however give the reader my thoughts, and leave them to the discussion of philosophers. In order to this I shall lay down some preliminary principles, which may serve as a foundation to those who shall apply themselves to discover the true cause of this phænomenon, with some instructions for judging of the several hypotheses that have been formed on this extraordinary subject.

1. IT is to be supposed, that throughout the whole country of Valles, no other winds are known during the whole year, than the southerly, that is between the S. and S. E. and this not only on the land, but also to a certain distance at sea; it evidently appearing that the winds are limited between the S. and S. E. It is therefore very strange that some writers should assert that they are confined between the S. and S. W. as this is absolutely false. There are indeed intervals when these winds are scarce felt, and an air, tho' extreamly small, seems to come from the north, and which forms the fog. 2. In winter the S. wind blows harder than in summer, especially near the surface of the earth. 3. Tho' no formal rain is

is ever known in the country of Valles, there are wetting fogs called Garuas, which continue the greatest part of the winter; but are never seen in summer. 4. When the Garuas fall, it is observed that the clouds, mist, or vapours, which rise from the earth, remain almost contiguous to its surface; and the same fog which is converted into a Garua, begins by a moist air, till the humidity gradually increasing to its greatest condensation, the small drops which fall, are easily distinguishable. This is so natural, that it is known in all other countries subject to any degree of cold, and, consequently, not to be wondered at in this.

I GIVE the name of cloud, mist, or vapours, to that which produces the Garua or small rain; for tho' there may be some accidental distinctions between these three kinds, they are not such as cause any material difference: The fog being only the vapour condensed more than when it first rose; and the cloud only a fog elevated to a greater height, and still more condensed than the former; so that in reality they may all be considered as one and the same thing, differing only in degrees of density, and therefore it is of little importance whatever name it is called by.

5. The rays of the sun during the summer, cause a prodigious heat all over Valles, and the more so as they are received upon a sandy soil, whence they are strongly reverberated, the winds being at the same time very weak. Hence it appears that the second hypothesis above related, is not founded on truth; for if the force or agitation of the south winds be the cause which hinders the vapours from rising to the height necessary for forming rain, this cause generally ceasing in the summer, the rain might be expected to descend; whereas quite the reverse happens, the Garuas being then much less common. 6. Particular times have been known when the nature

of the country departing as it were from its usual course, formal showers have fallen, as we have already mentioned (chap. i.) in describing the towns of Chocope, Truxillo, Tumbez, and other places; but with this singularity, that the winds continued at south, and blew much stronger during the time of the rain, than is usual either in winter or summer.

THESE six preliminary principles are so common to this climate, that they may be applied to all the places mentioned in this chapter; and are the only guides that must be followed in determining the true cause why it does not rain in Peru as in Europe, or, more properly, as is common in the torrid zone.

IT will readily be granted, that the wind blows more strongly in some regions of the atmosphere than in others; experience itself having sufficiently proved this to be fact: as on high mountains, along whose summits a strong wind is felt, when at the foot, hardly any can be perceived; at least we found this to be the case in all the mountains of the Cordilleras, one of the greatest inconveniences to us being the strength of the wind. And indeed this is every where so common, that any person may be convinced of it by only ascending a high tower, when he will soon perceive the difference between the strength of the wind at the top and at the bottom. I am not ignorant that some have endeavoured to prove, that on the land this proceeds from the inequalities of its surface, which hinder the winds from blowing in the plains or low countries with that force which is felt on eminences; but the same thing happening at sea, as experience has abundantly proved, it appears beyond dispute, that the surface is not the place where the wind exerts its greatest force. This being granted, it may be confidently asserted, that the south winds blow with the greatest force in a portion of the atmosphere at some distance from the earth; but not generally higher than that in which the rain is formed;

or

or where the aqueous particles unite so as to form drops of any sensible gravity or magnitude. In this country therefore the clouds or vapours elevated above this space, that is, those which have the greatest degree of altitude, move with a much less velocity than the winds under them. Nor is it uncommon in other climates, besides that of Valles, for these clouds to move in a direction contrary to the more dense ones below it. Thus it appears to me, that without the danger of advancing irregular suppositions, the space of the atmosphere, where the winds generally blow with the greatest force, is that where the large drops commonly called rain, are formed.

Now in order to explain the singularity of this remarkable phænomenon, I conceive that in summer, when the atmosphere is most rarified, the sun, by the influence of his rays, proportionally elevates the vapours of the earth, and gives them a greater degree of rarification; for his beams being then in a more perpendicular direction to the earth, they have the power of raising them to a greater height. These vapours on their touching the lower part of the atmosphere, where the winds blow with the greatest force, are carried away before they can rise to the height required for uniting into drops, and consequently no rain can be formed. For as the vapours issue from the earth, they are waisted along the lower region of the atmosphere, without any stop; and the winds blowing always from the south, and the vapours being rarified proportionally to the heat of the sun, its too great activity hinders them from uniting: Hence in summer the atmosphere is clear, or free from vapours.

IN winter the rays of the sun being less perpendicular to the surface of the earth, the atmosphere becomes considerably more condensed, but the winds from the south much more so, as being loaded with

the frigorific particles from the frozen zone, which particles it communicates to the vapours as they issue from the earth; and consequently renders them much more condensed than in summer: Hence they are hindered from rising with the same celerity as before.

To these must be added two other reasons, one, that the rays of the sun for want of sufficient activity dissipates the vapours less, so that they rise much slower. The other that the region where the wind has its greatest velocity being, in this season, near the earth, will not admit of their rising to any height; and thus they continue contiguous to its surface, where they still follow the same direction, and form the moist fog then felt; and having less space to dilate themselves than at a greater height, they, consequently, sooner come into contact, and when sufficiently condensed, descend in a Garua.

In the middle of the day the garua ceases, being then dispersed, which proceeds from the sun's rarifying the atmosphere, whence the vapours ascend and remain suspended at a greater height, and thus they are rendered more tenuous, and being raised to a region where they have more room to dilate, they are so far dispersed as to become imperceptible.

AFTER all, it must be owned that both in summer and winter, some vapours must surmount the difficulty of the wind in that region where its velocity is greatest, and getting above it ascend to a greater height; tho' not indeed in the very part where they first reached this current of wind, but at some distance from it; so that these vapours are to be considered, on one hand, as yielding to the current of the air, and, on the other, as ascending in proportion to the rarefaction they have received from the rays of the sun. Hence it follows, that these vapours cannot be those which are most condensed, as the difficulty of rising is always proportional

onal to the degree of condensation ; and at the same time their magnitude would render them more susceptible of the impulse of the wind. So that these consequently being the most subtile or tenuous, on having passed that region, the celerity with which they were before carried upwards is decreased, and great numbers of them being united from that lofty mist which is seen after the cloud is totally dissipated. This mist cannot be converted into rain ; for having passed above the region proper for its formation, all the parts become congealed, and their weight can never be increased sufficiently to overcome the resistance of the air which supports them ; for the quantity of those which have overcome this obstacle being inconsiderable, they cannot be united with a sufficient quantity of others to withstand the continual dissipation occasioned by the action of the rays of the sun. Nor can they descend in either snow or hail, as might be expected from their present state. Besides following always, tho' with less velocity, the current of the wind, any such concretion of them as to form a thick cloud is prevented ; for as we have already observed, these mists are so tenuous, as to afford in the day time a confused view of the disk of the sun, and of the stars in the night.

In order to render the premises agreeable to observation, one difficulty still remains, namely, that those lofty mists are seen only in winter, and not in summer. But this, in my opinion, must naturally be the consequence ; for besides the general reason that the stronger influence of the rays of the sun disperses them, it proceeds from the increase of the force of the winds during the winter, in a region nearer the earth than in summer ; and the nearer the lower part of this region is to the surface of the earth, the nearer also will be the upper part ; while, on the contrary, in the summer, the higher the lower part of this current of air is, the higher will be also

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its upper part; and, as we must suppose, with all philosophers, that the vapours of the earth can ascend only to that height, where the gravity of the particles of the vapours are equal to those of the air; and the rapidity of the wind extending in summer to these limits, they are consequently involved in its violent impulse; and thence there cannot be such a multitude of conglomerations as to form the mist so common in winter; for the winds in this season strongly blowing thro' a region nearer the earth, the agitation in the upper parts is proportionally less. And this current of air being below the region to which vapours can ascend, the space intercepted between the upper part of this current, and the part to which vapours rise, becomes filled with them. All this seems natural, and is confirmed by experience; for in winter the south winds are stronger on the land than in summer. But as a further proof may be thought necessary, I have added the following.

It has been said that in the town of Chocope, two very hard and continual rains have happened; and that the same thing is more frequently seen at Tumbez, and other towns of those parts, after some years of continual drought, which seems strange; for that being in the country of Valles, and not at all different from Lima, no rain would naturally be expected there. Two causes for this, however, have occurred to me, one of them flowing from the other. I shall begin with the first as productive of the second.

From what has been said, it may be inferred, that in a country or climate, where one and the same wind perpetually prevails, there can be no formal rain; and in order to form it, either the wind must entirely cease, or an opposite wind must arise, which by checking the course of the vapours, brings them into contact with those lately exhaled from the earth,
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and causes them to condense in proportion as they rise by the attraction of the sun, till being rendered heavier than the air by which they were supported, they descend in drops of water.

ON reconsidering the circumstances of what happened at Chocope, it will appear, that during the whole day, the sky was clear, and that it was not before five in the evening that the rain began, and with it the violence of the wind. It should also be observed that in the time of the Brisas in those climates where they are periodical, they blow strongest between the setting and rising of the sun; and this happening in September and the following months, forms the summer in Valles, when they enjoy clear days and a lucid atmosphere. This was the case at Chocope at the time of that rain; for tho' the inhabitants did not precisely mention the season in which that event happened, yet the several particulars related, especially that the south winds then prevailed with an uncommon force, sufficiently indicate that it was in the summer; as this would not have been at all remarkable in winter, when they are very variable and sometimes stormy. It may therefore be safely concluded that these events happened during the summer; and, by way of corollary, that the Brisas being stronger than usual, and advancing so far on the continent as even to reach the south winds, they were overpowered by them, and shifted their point; but the succeeding south winds rendering it impossible to return in the same place, they left their former region and blew in a current nearer the earth. By which means the vapours which had been exhaling during the whole day, after being carried by the strongest current of wind to a certain distance, ascended to the region where the Brisas prevailed; and being there repelled by them, had time to condense; for being within that region where the rain is formed, or where many imperceptible drops compose one

of a larger magnitude and gravity, and being more minutely divided by the influence of the sun they continued to ascend, till that power ceasing by the setting of the sun, they again condensed, and their weight becoming too heavy to be supported in the air, they descended in rain, which was the more violent as the vapours were strongly repulsed by the Brisas. At the dawn, these winds as usual, began to decrease, and the rain gradually lessened. The south winds blew all day as before; and there being then in the atmosphere, no other winds to oppose them, they carried with them the vapours as they exhaled, and the atmosphere continued clear and serene.

THIS happened at Chocope, situated at a much greater distance from the parts to which the Brisas extend than Tumbes, Piura, Sechura, and other towns where this is more frequent, as being nearer the equinoctial: notwithstanding, no Brisas or north-winds are felt in that part of the atmosphere near the surface of the earth. So that it is probable, or rather, indeed, evident from experience, that the north winds at the time they prevail, more easily reach to the countries nearest the equinoctial, than to those at a greater distance, tho' not so as to be felt in the atmosphere near the earth, but in a more elevated region. Consequently, it is natural for rains to be more frequent in the former than in the latter, where these winds very seldom reach, whether in that part of the atmosphere contiguous to the earth, or another, which being more distant from it they blow there more violently.

I AT first declared against any positive assertion that the opinion I have now laid before the reader, is founded on such undoubted physical principles, that no other can be advanced more conformable to phænomena; it being difficult immediately to fix on causes which agreeing with all circumstances,
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leaves the mind entirely satisfied: And as all within the reach of human perspicuity cannot be accommodated to every particular, as entire conviction requires, let it suffice that I have here delivered my thoughts; leaving the naturalists at full liberty to investigate the true cause, and when discovered, to reject my hypotheses.

As rain is seldom or never seen at Lima, so that place is also equally free from tempests; that those who have neither visited the mountains nor travelled into other parts, as Guayaquil or Chili, are absolute strangers to thunder and lightning; nothing of that kind being known here. Accordingly the inhabitants are extremely terrified when they first hear the former or see the latter. But it is very remarkable, that what is here entirely unknown, should be so common at thirty leagues distant, or even less, to the east of Lima; it being no farther to the mountains, where violent rains and tempests are as frequent as at Quito. The winds, tho' settled in the abovementioned points, are subject to variations, but almost imperceptible, as we shall explain. They are also very gentle, and even in the severest winters, never known to do any damage by their violence; so that if this country was free from other inconveniences and evils, its inhabitants could have nothing to desire, in order to render their lives truly agreeable. But with these signal advantages, nature has blended inconveniences, which greatly diminish their value; and reduce this country even below those, on which nature has not bestowed such great riches and fertility.

It has been observed, that the winds generally prevailing in Valles, throughout the whole year, comes from the south; but this admits of some exceptions, which, without any essential alteration, implies that sometimes the winds come from the north, but so very faint, as scarcely to move the
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vanes of the ships, and consist only of a very weak agitation of the air, just sufficient to indicate that the wind is changed from the south. This change is regularly in winter, and with it the fog immediately begins, which in some measure seems to coincide with what has been offered with regard to the reason why showers are unknown at Lima. This breath of wind is so particular, that from the very instant it begins, and before the wind is condensed, the inhabitants are unhappily sensible of it by violent head-aches, so as easily to know what sort of weather is coming on before they stir out of their chambers.

CHAP. VII.

Inconveniences, Distempers, and Evils, to which the City of LIMA is subject; particularly Earthquakes.

ONE of the inconveniences of Lima, during the summer, is that of being tormented with fleas and bugs, from which the utmost care is not sufficient to free the inhabitants. Their prodigious increase is partly owing to the dust of that dung, with which the streets are continually covered; and partly to the flatness of the roofs, where the same dust, wafted thither by the winds, produce these troublesome insects, which are continually dropping thro' the crevices of the boards into the apartments, and by that means render it impossible for the inhabitants, notwithstanding all their pains, to keep their houses free from them. The moschitos are very troublesome, but much less so than the former.

THE next, and indeed a most dreadful circumstance, is that of earthquakes, to which this country

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try is so subject, that the inhabitants are under continual apprehensions of being, from their suddenness and violence, buried in the ruins of their own houses. Several deplorable instances of this kind have happened in this unfortunate city; and lately proved the total destruction of all its buildings. These terrible concussions of nature are not regular, either with regard to their continuance or violence. But the interval between them is never of a length sufficient to obliterate the remembrance of them. In the year 1742 I had the curiosity to observe the distance of time between those which happened successively for a certain space. 1. On the 9th of May at three quarters after nine in the morning. 2. The 19th of the same month at midnight. 3. The 27th at 35 minutes after three in the evening. 4. The 12th of June at three quarters past five in the morning. 5. The 14th of October at nine at night; all which I carefully noted. And it must be observed that these concussions were the most considerable, and lasted near a minute; particularly that of the 27th of May, which continued near two minutes, beginning with one violent shock, and gradually terminating in tremulous motions. Between these above noted were several others, which I omitted, as being neither so lasting nor violent.

These earthquakes, tho' so sudden, have their presages, one of the principal of which is, a rumbling noise in the bowels of the earth, about a minute before the shocks are felt; and this noise does not continue in the place where it was first produced, but seems to pervade all the adjacent subterraneous parts. This is followed by dismal howlings of the dogs, which seem to have the first perception of the approaching danger. The beasts of burden passing the streets, stop, and, by a natural instinct spread open their legs, the better to secure themselves from falling. On these portents the terrified inhabitants fly
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from their houses into the streets with such precipitation, that if it happens in the night, they appear quite naked; fear and the urgency of the danger, banishing at once all sense of decency. Thus the streets exhibit such odd and singular figures, that might even afford matter for diversion, were it possible, in so terrible a moment. This sudden concourse is accompanied with the cries of children waked out of their sleep, blended with the lamentations of the women, whose agonizing prayers to the saints, increase the common fear and confusion: The men also are too much affected to refrain from giving vent to their terror; so that the whole city exhibits one dreadful scene of consternation and horror. Nor does this end with the shock, none venturing to return to their houses thro' fear of a repetition, which frequently demolishes those buildings which had been weakened by the first.

My attention to set down the exact time of the abovementioned shocks, taught me, that they happen indifferently at half ebb, or half flood; but never at high or low water; which sufficiently confutes what some have confidently advanced, namely, that earthquakes always happen during the six hours of ebb, but never during the flood; because this favours the hypothesis they have advanced to account for their origin and causes; an hypothesis which, in my opinion, does not so sufficiently correspond with observations, as to recommend itself to the assent of intelligent persons.

THE nature of this country is so adapted to earthquakes, that all ages have seen their terrible devastations; and that nothing may be wanting to satisfy the curiosity of the reader, I shall introduce the account of that which laid this large and splendid city totally in ruins, with a short narrative of the most remarkable that have been felt in latter ages.

1. The first concussion since the establishment of the

the Spaniards in these parts, happened in 1582, a few years after the foundation of Lima; but the damage was much less than in some of the succeeding, being chiefly confined to the city of Arequipa, which being situated near that spot, where the motion of the earth was most violent, the greatest part of it was destroyed.

2. On the 9th of July 1586, Lima was visited with another earthquake, and so violent, that even to this time it is solemnly commemorated on the day of the visitation of Elizabeth.

3. In 1609, another like the former happened.

4. On the 27th of November 1630, such prodigious damage was done in the city by an earthquake, and the entire ruin of it apprehended, that in acknowledgment of its deliverance, a festival, called *Nuestra Senora del Milagro*, is annually celebrated on that day.

5. In the year 1655, on the 3d of November, the most stately edifices, and a great number of houses, were thrown down by an earthquake; the inhabitants fled into the country, and remained there several days, to avoid the danger they were threatened with in the city.

6. On the 17th of June 1678, another earthquake happened, by which several houses were destroyed, and the churches considerably damaged.

7. One of the most dreadful of which we have any account, was that of the 20th of October, 1687. It began at four in the morning, with the destruction of several publick edifices and houses, whereby great numbers of persons perished; but this was little more than a presage of what was to follow, and preserved the greatest part of the inhabitants from being buried under the ruins of the city. The shock was repeated at six in the morning with such impetuous concussions, that whatever had withstood the first, was now laid in ruins; and the inhabitants

thought themselves very fortunate in being only spectators of the general devastation from the streets and squares, to which they had directed their flight on the first warning. During this second concussion the sea retired considerably from its bounds, and returning in mountainous waves, totally overwhelmed Callao, and the neighbouring parts, together with the miserable inhabitants.

8. On the 29th of September, 1697, this place was visited by another terrible earthquake.

9. On the 14th of July, 1699, a great number of houses were destroyed by another concussion.

10. The 6th of February, 1716, a like disaster.

11. On the 8th of January, 1725, another.

12. On the 2d of December, 1732, was another earthquake at one in the morning.

13, 14, 15. In the years 1690, 1734, and 1745, three others happened, but neither violent nor lasting. But all these were less terrible than the last, as will appear from the following account of it.

16. On the 28th of October, 1746, at half an hour after ten at night, five hours and three quarters before the full of the moon, the concussions began with such violence, that in little more than three minutes, the greatest part, if not all the buildings, great and small in the whole city, were destroyed, burying under their ruins those inhabitants who had not made sufficient haste into the streets and squares; the only places of safety in these terrible convulsions of nature. At length the horrible effects of this first shock ceased; but the tranquility was of short duration, concussions returning with such frequent repetitions, that the inhabitants, according to the account sent of it, computed two hundred in the first twenty four hours, and to the 24th of February of the following year, 1747, when the narrative was dated, no less than four hundred and

and fifty shocks were observed, some of which, if less lasting, were equal to the first in violence.

THE fort of Callao, at the very same hour sunk into the like ruins; but what it suffered from the earthquake in its buildings, was inconsiderable, when compared to the terrible catastrophe which followed; for the sea, as is usual on such occasions, receding to a considerable distance, returned in mountainous waves foaming with the violence of the agitation, and suddenly turned Callao, and the neighbouring country into a sea. This was not, however, totally performed by the first swell of the waves; for the sea retiring further, returned with still more impetuosity; the stupendous water covering both the walls and other buildings of the place; so that whatever had escaped the first, was now totally overwhelmed by those terrible mountains of waves; and nothing remained except a piece of the wall of the fort of Santa Cruz, as a memorial of this terrible devastation. There were then twenty-three ships and vessels, great and small, in the harbour, of which nineteen were absolutely sunk, and the other four, among which was a frigate called St. Fermin, carried by the force of the waves to a great distance up the country.

THIS terrible inundation extended to other ports on the coast, as Cavallos and Guanape; and the towns of Chancay, Guaura, and the valleys della Barranca, Sape, and Pativilca, underwent the same fate as the city of Lima. The number of persons who perished in the ruin of that city, before the 31st of the same month of October, according to the bodies found, amounted to 1300; besides the maimed and wounded, many of which lived only a short time in torture. At Callao, where the number of inhabitants amounted to about 4000, two hundred only escaped; and twenty-two of these by means of the above-mention'd fragment of a wall.

ACCORDING to an account sent to Lima after this

accident, a volcano in Lucanas burst forth the same night, and ejected such quantities of water, that the whole country was overflowed; and in the mountain near Patas, called Conversiones de Caxamarquilla, three other volcanos burst, discharging frightful torrents of water; like that of Carguayrasso, mentioned in the first Vol. of this Work.

SOME days before this deplorable event, subterraneous noises were heard at Lima, sometimes resembling the bellowing of oxen, and at others the discharges of artillery. And even after the earthquake they were still heard during the silence of the night; a convincing proof that the inflammable matter was not totally exhausted, nor the cause of the shocks absolutely removed.

THE frequent earthquakes to which south America, particularly Lima, and all the country of Valles is subject, opens a field for enquiry not less ample than that just mentioned, concerning their causes. Many hypotheses have been formed by philosophers; but the generality, and with the greatest appearance of truth, agree in deducing them principally from the violent force of the air contained in sulphureous substances and other minerals, and also that confined in the pores of the earth; which being too much compressed by the incumbent load, make a very violent resistance. This is so far from implying any contradiction, that besides being countenanced by reason, it is also confirmed by experience. But the apparent difficulty consists in explaining how the vents of the earth become again filled with air, after one concussion has happened; it being natural to think, that the quantity which struggled for vent, was thereby discharged, and that a long interval of time was necessary before another could be produced. Also why some countries are more subject to these terrible convulsions than others. Though this subject has been treated of by several

several authors, I think it my duty here to deliver the opinion which to me seems most probable.

EXPERIENCE has sufficiently shewed, especially in this country by the many volcanoes in the Cordilleras which pass through it, that the bursting of a new burning mountain causes a violent earthquake, so as totally to destroy all the towns within its reach; as happened at the opening of the volcano in the desert of Carguagoazo as mentioned in Vol. I. This tremulous motion, which we may properly call an earthquake, does not so usually happen in case of a second eruption, when an aperture has been before made; or, at least, the motion it causes in the earth is comparatively but small. Whence it is inferred that an aperture being once made, however the substances in the bowels of the mountain may take fire, the convulsion of the earth is seldom or never felt a second time. The reason of which is, that the sudden reiteration of this accident greatly augments the volume of the air by rarefaction, and as it finds an easy passage without labouring in the bowels of the earth for a vent, no other concussion is produced than what must follow from the eruption of a great quantity of air through an aperture too narrow for its volume.

THE formation of volcanoes is now well known; and that they owe their origin to sulphureous, nitrous, and other combustible substances in the bowels of the earth; for these being intermixed, and, as it were, turned into a kind of paste by the subterraneous waters, ferment to a certain degree, when they take fire, and by dilating the contiguous wind or air, and also that within their pores, so that its volume is prodigiously increased beyond what it was before the inflammation, it produces the same effect as gunpowder, when fired in the narrow space of a mine; but with this difference, that powder on being fired immediately disappears, whereas the vol-

cano being once ignited continues so till all the oleaginous and sulphureous particles contained in the mountain are consumed.

VOLCANOES are of two kinds, contracted and dilated. The former are found where a great quantity of inflammable matter is confined in small space; the latter where these combustibles are scattered at a considerable distance from one another. The first are chiefly contained in the bowels of mountains, which may be considered as the natural depositaries of these substances. The second may be considered as ramifications, which, tho' proceeding from the former, are, however, independent, extending themselves under the plains, and traversing them in several directions. This being admitted it will appear, that in whatever country volcanoes, or depositaries of these substances, are very common, the plains will be more diversified with these ramifications; for we are not to imagine that it is only within the bosoms of mountains that substances of this nature exist, and that they are not disseminated through all the parts of the adjacent region. Thus the country now under consideration, abounding in these igneous substances more than any other, must, by the continual inflammation which necessarily follows their natural preparation for it, be more exposed to earthquakes.

BESIDES the suggestions of natural reason, that a country containing many volcanoes must also be every where veined with ramifications of correspondent substances, it is confirmed by experiment in Peru; where we find almost universally, mines of nitre, sulphure, vitriol, salt, bitumen, and other inflammatory substances, which sufficiently confirm the truth of these inferences.

THE soil both of Quito and Valles, particularly the latter, is hollow and spongy, so as to be fuller of cavities or pores, than is usually seen in that of other

other countries ; and consequently abounds with subterraneous waters. Besides which, as I shall presently shew more at large, the waters, from the ice continually melting on the mountains, being filtrated through these pores during their descent, penetrate deep into the cavities of the earth ; and during their subterraneous course, moisten, and turn into a kind of paste, those sulphureous and nitrous substances ; and though they are not here in such prodigious quantities as in volcanoes, yet they are sufficient, from their inflammatory quality, to rarify the air contained in them, which easily incorporating itself with that confined in the innumerable pores, cavities or veins of the earth, compresses it by its greater expansion, and at the same time rarifies it by its heat ; but the cavities being too narrow to admit of its proper dilatation, it struggles for a vent, and these efforts shake all the contiguous parts ; till at last, where it finds the least resistance, it forces itself a passage, which sometimes closes again by the tremulous motion it occasions, and at others continues open ; as may be seen in different parts of all these countries. When on account of the resistance being equal, it finds a passage in several parts, the chasms or fissures are generally smaller, so that rarely any vestiges remain after the concussion. At other times when the subterranean cavities are so large as to form subterranean caverns, they not only rend the earth, and at every shock leave it full of disruptions ; but also cause it to sink into spacious hollows ; as I particularly observed near the town of Guaranda, a place in the jurisdiction of Chimbo, in the province of Quito ; where in the year 1744 all the ground on one side of the chasm sunk near a yard, the other side rising in the same proportion, though with some inequalities on both sides.

THE loud subterraneous noises preceding earthquakes,

quakes, and which imitate thunder at a distance, seem to correspond with the abovementioned cause and formation of earthquakes, as they can only proceed from the rarefaction of the air, on the ignition of the explosive substances, which being impetuously propagated thro' all the caverns of the earth; propelling, and at the same time dilating what is contained in them, till all the cavities being pervaded, and no vent found, the efforts for a further dilatation, begin, and form the concussion with which it terminates.

It must be observed that at the time when the air, which had been confined within the earth, bursts through it, neither the light nor fire emitted from the chasms are seen. The reason is, that this light and fire exist only at the instant when the matter becomes inflamed, and the air spreading itself through all the veins, the light is extinguished by its dilatation, and becomes afterwards imperceptible. It is necessary to suppose that there must be some, tho' a short interval, between the inflammation and effect. Neither is the flame permanent, the substances ignited not containing those solid and oleaginous particles which supply the volcanoes. Besides they are not in sufficient quantity to ascend from the subterraneous caverns where they took fire to the superficies of the earth. Farther, this not being the place where the matter was originally contained, but that where it has forced a passage for the quantity of air which its rarefaction augmented, the first light is lost among the meanders of its course, and therefore not to be seen when the wind violently forces a passage. There have, however, been instances when the light has been seen, though much oftner the smoke; but this is generally lost in the clouds of dust ascending at the time of the concussion.

THE shocks are repeated at intervals, of a few days, sometimes of a few hours; proceeding from the matter being dispersed in different places, and
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each in a different degree of aptitude for inflammation, one part kindling after another successively, as each is more or less prepared. Hence proceed also the different violence of the shocks and the different intervals of time. For the quantity first inflamed increases, by its heat, other inflammable portions of matter; whence a part which would not have been ignited till after some days, by means of this adventitious fire, becomes so within a few hours. The second shocks are more violent, and cause a greater destruction than the first; for the fire of the portion of matter which is first inflamed, though in itself small, is sufficient to accelerate the fermentation of a much larger quantity, and consequently must be attended with more powerful effects.

THOUGH the summer here, as we have already observed, is considerably warm, yet is it not productive of venomous creatures, which in this country are not known; and the same may be said of all Valles, though there are some parts, as Tumbez and Piura, where the heat is nearly equal to that at Guayaquil. This singularity can therefore proceed from no other cause than the natural drought of the climate.

THE distempers most common at Lima are malignant, intermittent and catarrhus fevers, pleurifies, and constipations; and these rage continually in the city. The small-pox is also known here as at Quito, but is not annual; though when it prevails, great numbers are swept away by it.

CONVULSIONS are likewise very common and no less fatal. This disorder though unknown at Quito, is frequent all over Valles, but more dangerous in some parts than in others. Something has already been said of this distemper in our account of Carthage, but a more circumstantial description of it was reserved for this place.

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THIS distemper is divided into two kinds, the common or partial, and the malignant or arched convulsions. They both come on when nature is struggling in the crisis of some acute distemper; but with this important difference, that those attacked with the former, often recover, though the greater part die on the third or fourth day, the term of its duration; while those who have the misfortune of being attacked by the latter, sink under it in two or three days, it being very extraordinary to recover, and is therefore termed malignant.

THE spasms or convulsions consist in a total inactivity of the muscles, and a constriction of the nerves of the whole body, beginning with those of the head; and these nerves being the channels which convey nourishment to the body, and this nourishment being precluded by the constriction of its conduits, they all successively suffer; the muscles, by having lost their activity, cannot assist in the motion of the nerves, and these being constricted, can no longer perform their office. Add to this, a pungent humour dispersing itself through all the membranes of the body, and causing insupportable pains; so that the groaning patient labours under inconceivable tortures, which are still increased on his being moved, though with the greatest care and gentleness, from one side to the other. The throat is so contracted that nothing can be conveyed into the stomach. The jaws are also sometimes so closely locked, as impossible to be opened. Thus the miserable patient lies without motion, and tortured in every part of his body, till nature quite exhausted falls a victim to this deleterious distemper.

In the partial kind, the pulse is no more affected than in the distemper which preceded it, and commonly abates the violence of a fever. But in the malignant kind it augments, the circulations being quickened; and whether it be the effect of the humour
impe-

impetuously circulating through every part, or of the pain proceeding from the laceration of the membranes, and abrading the muscles, the patient falls into a lethargy, but which does not remove the torturing sensation of these punctures, often so insupportable, that the miserable patient violently turns himself, and thus augments his agonies, as evidently appears from his piercing cries and groans.

THE malignant or arched spasm, even in the first stage is so violent, as to cause a contraction of the nerves of the vertebræ from the brain downwards; and as the distemper increases, and the malignant humour acquires great activity, the nerves become more and more constricted, that the body of the patient, contrary to nature, inclines backward into an arch, and all the bones become dislocated. However terrible the pains resulting from hence may seem, they are still increased by those of the other species of convulsions, when the violence is such that the patient usually loses all sensation, and falls into a total inaction, not having breath to utter his complaints.

It is common at the beginning of this distemper to be totally convulsed, so that every part of the patient is affected, and, during the continuance, is, as it were, deprived of all sensation. Their return is more frequent and lasting as the distemper increases, till nature becomes entirely spent; when the lethargic fits succeed, and it is generally in one of these that the patient breathes his last.

THE usual method of treating this distemper is by keeping both the bed, and the chamber very close, even with a fire in it, that the pores being opened by the heat, the transpiration may be more copious. Laxative clysters are often injected to mollify the contractions of the intestines, and other internal parts. External applications are also applied to soften the parts, and open the ducts by

which nature may evacuate the morbid humour. For the same intention and to check its progress, cordials and diuretic draughts are prescribed; and also the bath; but the latter only at the beginning of the first stage of the distemper; for if it is found to increase on the second day, bathing is no longer ordered.

THE women of Lima are subject to a distemper, extremely painful, very contagious, and almost incurable: namely, a cancer in the matrix, which even at the beginning is attended with such excruciating pains, that their lives are one continued series of groans and complaints. During its progress they discharge great quantities of morbid humours, become attenuated, fall into a state of languor, which gradually puts a period to their lives. It usually continues some years, with intervals of ease, during which if the evacuations do not entirely cease, they are considerably intermitted; the pains seem over, and they are capable of dressing themselves and walking abroad; but the disease suddenly returns with double violence, and the patient becomes totally disabled. This distemper comes on so imperceptibly, as not to be indicated either by the countenance or pulse, till at its height; and such is the contagion of it, that it is contracted only by sitting in the same chair commonly used by an infected person, or wearing her cloaths; but it has not been known to affect the men, husbands usually living with their wives till the last stage of the distemper. Two causes are assigned for this malady, their excessive use of perfumes, which they always carry about them, and may doubtless contribute greatly to promote it; the other a continual riding in their calashes, but this does not seem to be of so much consequence as the former. For then the most distinguished of the fair sex in other countries, who ride in coaches, and even

even use the more violent exercise of the horse, would not be exempt from it.

SLOW or hectic fevers also prevail greatly in these countries, and are likewise contagious, but more from a want of a proper care in the furniture and apparel of the persons infected, than any malignancy of the climate.

THE venereal disease is equally common in this country as in those we have already mentioned; it is indeed general in all that part of America; and as little attention is given to it till arrived to a great height, the general custom in all those parts, a repetition here would be needless.

CHAP. VIII.

Fertility of the Territories of LIMA, and the manner of cultivating the soil.

IT is natural to think that a country, where rain is seldom or ever known, must, of necessity, be totally barren; whereas the country of Lima enjoys a fertility to be envied, producing all kinds of grain, and a prodigious variety of fruits. Here industry and art supply that moisture which the clouds seem to withhold; and the soil is by this means rendered remarkably fruitful, amidst a continual drought.

It has already been observed, that one of the principal cares of the Yncas was the cutting and disposing in the most advantageous manner, trenches or small canals, in order to conduct the waters of the rivers to nourish every part, and render large fields capable of producing grain. The Spaniards finding these useful works ready executed to their hands, took care to keep them in the same order; and by these are watered the spacious fields of
wheat

wheat and barley, large meadows, plantations of sugar canes, and olive trees, vineyards and gardens of all kinds; all yielding uncommon plenty. Lima differs from Quito, where the fruits of the earth have no determined seasons; but here the harvests are gathered in, and the trees drop their leaves, according to their respective natures; for those which grow spontaneously in a hot climate, though the liveliness of their verdure fades, their leaves do not fall off till others supply their place. The blossoms also have their respective times, and are correspondently succeeded by fruits; so that this country resembles those of the temperate zones, no less in the product and seasons of corn, blossoms, fruits and flowers, than in the difference of winter and summer.

BEFORE the earthquake 1687, when this city suffered in so deplorable a manner, the harvests of wheat and barley were sufficient to supply the wants of the country without any importation, especially of wheat; but by this convulsion of nature, the soil was so viciated, that the wheat rotted soon after it was sown, occasioned, probably, by the vast clouds of sulphureous particles then exhaled, and the prodigious quantities of nitrous effluvia diffused thorough it. This obliged the owners of the lands to apply them to other uses, and accordingly many of them were turned into meadows of clover, plantations of sugar-canes, and other vegetables, which they found not subject to the same misfortune. After the land had continued forty years in this state of sterility, the husbandmen began to perceive such an alteration in the soil, as promised a speedy return to its former goodness. Accordingly some trials were successfully made with wheat, and by degrees that grain was found to thrive as before that dreadful event. But whether it be from the other plants, which have been cultivated in those parts, or from any mistrust of the
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husbandmen, the same quantity has not been sown as before. It is natural to think that the late dreadful earthquake must have had the same pernicious effects on the soil. Tho' by means of the establishment of the corn trade with Chili since that time, the consequences will not be so sensibly felt. The fields in the neighbourhood of Lima are chiefly sown with clover, of which there is here a consumption not to be paralleled in any other place; it being the common fodder for all beasts, particularly the mules and horses, of which there is here an inconceivable number.

THE other parts of the country are taken up with plantations already mentioned, among which those of canes are not the least, and yield an excellent kind of sugar. All these fields and plantations are cultivated by negro slaves, purchased for this service; and the same is seen in the other improved parts of Valles.

THE olive plantations appear like thick forests; for besides the height, magnitude, and fulness of leaves of these trees, in all which they exceed those of Spain, they are never pruned, by which means their branches became so interwoven, that the light cannot penetrate through their foliage. The plough is not used here, the only cultivation they require, being to clear the holes made at the foot of each for receiving the water, to keep the trenches open which convey it, and every three or four years to cut down all shoots or cions, in order to form passages for gathering the fruit. With this small trouble the inhabitants have an uncommon plenty of the finest olives, which they either commit to the press for oil, or pickle, they being particularly adapted to the latter, both with regard to their beauty, largeness, and flavour. Their oil is much preferable to that of Spain.

THE country contiguous to the city is covered
with

with gardens, producing all the herbs and fruits known in Spain, and of the same goodness and beauty, besides those common to America; all which flourish here in a very uncommon degree; so that none of the parts of Peru, at least such as we visited, are to be compared with those of the neighbourhood of Lima, where every place is covered with fruits and esculent vegetables.

It also enjoys another singular advantage, the whole year being as it were summer with regard to the plenty and freshness of fruits; for the seasons of the year varying alternately in Valles and the mountains, when the time of fruits is over in Valles, it begins on the skirts of the mountains; and the distance from Lima being not above twenty five or thirty leagues, they are brought thither, and by this means the city is constantly supplied with fruits, except a few, as grapes, melons and water-melons, which requiring a hot climate, do not come to perfection in the mountains.

THE grapes are of various kinds; and among them, one called the Italian, very large and delicious. The vines extend themselves on the surface of the ground, which is very well adapted to support them, being either stony or full of sand. These vines are pruned and watered at proper times, and thrive remarkably without any other care.

No other culture is bestowed on those designed for wine, for both at Ica, Pisco, Nasca, and all other parts where they grow, they are form'd into espaliers. None of the grapes near Lima are used in making wine, the demand for them in other respects being too large.

THE soil is stony and sandy, that is, consisting of smooth flints or pebbles, which are so numerous that as other soils are entirely sand, rock, or earth, this is wholly of the above stones; and in some parts prove very inconvenient to travellers, whether in a carriage

carriage or on horseback. The arable lands have a stratum of about a foot or two of earth, but below that the whole consists entirely of stones. From this circumstance, the similarity of all the neighbouring coasts, and the bottom of the sea, this whole space may be concluded to have been formerly covered by the ocean, to the distance of 3 or 4 leagues, or even farther, beyond its present limits. This is particularly observable in a bay about five leagues north of Callao, called Marques, where in all appearance, not many years since, the sea covered above half a league of what is now Terra Firma, and the extent of a league and a half along the coast.

THE rocks in the most inland part of this bay are perforated and smoothed like those washed by the waves; a sufficient proof that the sea formed these large cavities, and undermined such prodigious masses as lie on the ground, by its continual elisions; and it seems natural to think that the like must have happened in the country contiguous to Lima, and that the parts, consisting of pebbles like those at the bottom of the adjacent sea, were formerly covered by the water.

ANOTHER singularity in this arid country is, the abundance of springs, water being found every where with little labour, by digging only four or five feet below the surface. This may arise from two causes; the one, that the earth, being, from its composition very spongy, the water of the sea easily insinuates itself to a great distance, and is filtered in passing through its pores. The other, that the many torrents after descending from the mountains, soon lose themselves in these plains, but continue their course along the subterranean veins of the earth; for this stony quality of the soil from the nature of the springs cannot extend to any great depth, and underneath it the stratum is hard and compact; consequently the water must be conveyed to the

most porous parts, which being the stony, it there precipitates into a subterranean course, leaving the surface dry. We have already observed * that from many of the rivers in Valles, though apparently dry, the inhabitants procure a sufficient quantity of water by digging wells in the beds over which their waters run in the winter: others might be passed without being known, but the bottom consisting entirely of pebbles, wherever the beasts set their feet, the water immediately oozes out. The reason of this is, that the water at that time runs a little below the surface, and I do not doubt but the same will be found in all Valles, though at different depths in different places.

THIS plenty of subterraneous streams is doubtless of great advantage to the fertility of the country, particularly with regard to the larger plants, whose roots strike deepest; and this seems a bountiful indulgence of the wise author of nature, who to provide against the sterility which would certainly affect these countries from a want of water, has sent a supply from the mountains, either in open rivers or subterraneous canals.

THE lands in the jurisdiction of Chancay, like the other parts of the coasts of Peru, are manured with the dung of certain sea birds, which abound here in a very extraordinary manner. These they call Guanoes, and the dung Guano, the Indian name for excrement in general. These birds, after spending the whole day in catching their food in the sea, repair at night to rest on the islands near the coast, and their number being so great as entirely to cover the ground, they leave a proportionable quantity of excrement or dung. This is dried by the heat of the sun into a crust, and is daily encreasing, so that notwithstanding great quantities are taken away, it is never exhausted. Some will have this Guano to be

* Chap. I. of this Vol.

be only earth endowed with the quality of raising a ferment in the soil with which it is mixed. This opinion is founded on the prodigious quantities carried off from those islands, and on the experiment made by digging or boring, by which the appearance at a certain depth, was the same as at the superficies; whence it is concluded, that the earth is naturally endowed with the heating quality of dung or Guano. This would seem less improbable, did not both its appearance and smell prove it to be the excrement in question. I was in these islands when several barks came to load with it; when the insupportable smell left me no room to doubt of the nature of their cargo. I do not however pretend to deny, but that it may be mixed with earth, or that the most superficial part of the earth does not contract the like virtue, so as to produce the same effect. But however it be, this is the manure used in the fields sowed with maize, and with proper waterings is found greatly to fertilize the soil, a little of it being put close to every stem, and immediately watered. It is also of use in fields of other grain, except wheat and barley, and, consequently, prodigious quantities of it yearly used in agriculture.

BESIDES the orchards, fields, and gardens, with which this country is so delightfully variegated, there are other parts where nature itself spontaneously furnishes beautiful prospects for the inhabitants, and plenty of excellent food for their cattle; particularly the hills of St. Christopher and Amancaes, whose perpetual verdure diversified in spring with elegant flowers, seems to invite the neighbouring inhabitants to a nearer enjoyment of the beauties it presents at a distance to their view. The parts in the neighbourhood of the city to the distance of six or eight leagues, offer the like entertainment; and accordingly many families resort thither for the change of air, and the tranquility of rural amuse-

ments. The hills called Amancaes, already mentioned, have their name from a certain flower growing on them. It is yellow and of the campanula form, with four pointed leaves. Its colour is remarkably brilliant, and in that wholly consists its value, being totally void of fragrancy.

BESIDES these delightful retreats, the city has a publick walk in the suburb of St. Lazaro, called Alameda, consisting of rows of orange and lemon trees; along the banks of the river is another called the Acho, to which there is a daily resort of coaches and calashes.

THE only monuments of antiquity remaining in the neighbourhood of Lima are the Guacas, or sepulchres of the Indians, and some walls, which were built on both sides of the roads, and are frequently seen all over this country. But three leagues north east of the city, in a valley called Guachipa, are still standing the walls of a large town. Through ignorance I did not visit them whilst I was at Lima; the account of them, however, which the ingenious marquis de Valde Lyrios was pleased to give me, may be equally relied on, as if related from my own knowledge; especially as he took a very accurate survey of the whole. He observed that the streets were very narrow, that the walls of the houses, which in common with all the buildings of that time were without roofs, were only of mud, and that each house consisted of three small square apartments. The doors towards the street, were not so high as the general stature of a man, but the walls wanted little of three yards. Among all the houses which composed this large town, situated at the foot of a mountain, is one, whose walls overlook all the others, and thence it is concluded to have belonged to the Casique or prince; though its ruinous condition render it impossible to determine absolutely. The inhabitants of this valley, where the fruitful fields are watered from the river Rimac, at no great distance

rance from these ruins, call them old Caxamarca, though it cannot now be discovered whether that was the real name of the town in the times of Paganism. For there neither remains any memorial of such tradition, nor any mention of it in the histories of that kingdom, written by Garcilazo, and Herrera; so that all we know is, that the epithet old is now applied to it by way of distinction from the present town of Caxamarca.

ONE astonishing particular in the walls of this town, and in all others in the neighbouring valleys, is, that though built on the surface of the earth, without any foundation, they have withstood those violent earthquakes which overthrew the more solid buildings of Lima and other large towns erected in the Spanish manner; having received no other damage than what naturally results from being forsaken, or what the drivers have done, who make it a resting place for their cattle in the road to Lima.

FROM the construction of these houses it may be inferred, that long experience has instructed the natives, that in parts so subject to earthquakes, it was improper to lay a foundation in order to strengthen the walls; and tradition informs us, that when the newly conquered Indians saw the Spaniards dig foundations for lofty buildings, they laughed at them, telling them they were digging their own sepulchres; intimating that the earthquakes would bury them under the ruins of their houses. It is indeed a melancholy proof of pride and obitancy, that after having the prudent example of the Indians before their eyes, the total ruin of the city at four different times in less than the space of two hundred years, has not been able entirely to eradicate the destructive passion for airy and elegant buildings, tho' these necessarily require large and lofty walls, which must have a foundation proportional to the

magnitude of the structure, and the weight they are to support.

CHAP. IX.

Of the Plenty and different Kinds of Provisions at LIMA.

THE fertility of the soil, the goodness of the climate, and the convenient situation of Lima, concur to maintain in it a constant plenty. The fruits and herbs have been already mentioned; it remains that we consider the meat and fish with which it is also equally provided.

THE bread at Lima is incontestibly the best in all this part of America, both with regard to its colour and taste, the goodness of the corn being improved by the manner of working it; and at the same time so reasonable, that the inhabitants use no other. It is of three kinds, one called Criollo, the crumb of which is very light and spongy; the second French bread; and the last soft bread. It is kneaded by negroes employed by the bakers, many of whom are very rich, and their shops always well provided. Besides their own slaves, the bakers are also obliged to receive any delivered up to them by their masters to work as a punishment, and for these, besides finding the slaves in provisions, they pay the master the usual wages in money or in bread. This punishment is the severest that can be inflicted on them, and, indeed, all the hardships and cruelties of the galleys are less than what these wretches are obliged to undergo. They are forced to work the whole day and part of the night, with little food and less sleep; so that in a few days the most vigorous and stubborn
slave

slave becomes weak and submissive, and prostrates himself before his master, with tears, intreaties and promises of amendment on being removed from that place, the dread of which is doubtless of the greatest use in awing the vast number of slaves, both within and without the city.

THEIR mutton is the most common food, and is very palatable, from the nitrous pastures where the sheep are fattened. The beef also is good; but little eaten except by the Europeans, so that two or three beasts supply the city for a week. Here is also plenty of poultry, partridges, turtle-doves, &c. Pork is also in great abundance, though not equally delicate with that of Carthagena. The lard is used in dressing all kinds of dishes whether of flesh or fish, oil being only used in sallads and the like. This method of cookery is said to have had its rise when the country afforded no oil, and has been continued to the present time, notwithstanding it is now produced in great quantities. Antonia de Rivero, an inhabitant of Lima in the year 1660, planted the first olive-tree ever seen in Peru.

FROM the mountains, are often sent by way of present, frozen calves; being killed there, and left two or three days on the heaths to freeze; after which they are carried to Lima, where they may be kept any time required, without the least tendency to putrefaction.

OF fish there is still a greater variety daily brought from the neighbouring parts of Chorillos, Callao, and Ancon, the Indian inhabitants of which make fishing their whole business. The most palatable are the Corbinas, and the Pege Reyes, or king's fish; but those in the greatest plenty, and at the same time very palatable, are the anchovies. The Corbinas, and the king's fish, infinitely excel those of Spain; the latter is also remarkable for its size, being generally six or seven Paris inches in length;

yet even these are thought to be surpassed by those caught in Buenos Ayres river. It is a salt water fish, but very little different from that caught in the rivers of Spain. The river of Lima affords a sort of prawns, two or three inches in length, but those should rather be called Cray-fish.

THE whole coasts abound with such shoals of anchovies, as exceed all comparison; and besides the vast quantities caught by fishermen, they are the chief food of innumerable flights of birds, with which all those islands abound, and commonly called Guanoes, possibly from the Guano or dung mentioned in the preceding chapter; many of them are indeed alcatraces, a kind of gull, though all comprehended under the generical name of Guanoes. A little after the appearance of the sun, they rise from those islands in such large and thick flights as totally to cover them, and fly towards the sea for an hour or two, without any visible decrease of their number. When at some distance from the land they divide themselves, and begin their fishing in a very entertaining manner. They fly in a circle at a considerable height above the water, and on seeing a fish, they dart down with their beak foremost and their wings closed, with such force that the agitation of the water is seen at a distance; after which they rise again into the air and devour the fish. Sometimes they remain a considerable time under water, and rise at some distance from the place where they fell, doubtless because the fish has endeavoured to escape, thus disputing celerity with them in their own element. They are continually seen in the place they frequent, some watching in gyrations, some darting down, others rising with their prey; while their great numbers render this confusion diverting to the spectator. When they are either tired or satisfied they alight upon the waves,
and

and at sun set, forming themselves into one body, withdraw to the islands where they pass the night.

At the port of Callao it is observed that all the birds which rest on those islands to the N. of it, in the morning universally fly towards the S. in quest of prey, returning in the evening to their place of rest; when the middle of the flight is over the harbour neither the beginning nor end can be seen, and the whole flock take up two or three hours in passing over.

THOUGH shell fish are very scarce along this coast, some are found near Callao; particularly a kind, the shell of which resembles that of a muscle, though much larger. The fish itself has more the appearance of an oyster, and much the same taste.

THE wines at Lima are of different sorts, white, red, and dark-red: and of each sort some are very generous and delicious. They are imported from the coasts of Nasca, Pisco, Lucumba, and Chili; but the latter produces the best, and among them some Muscadell. The wine of Nasca is white, and has the least demand of any, being inferior to the others both in quality and taste. That from Pisco has the greatest sale, and from the same place come all the brandies either used at Lima or exported; no rum being either made or used here.

MOST of the dried fruits are brought from Chili; and by means of the trade carried on between the two kingdoms, Lima is supplied with all sorts of fruits known in Spain, as almonds, walnuts, filberts, pears, apples, &c. so that their tables cannot in this respect fail of plenty and elegance, having at one time the fruits of the different seasons, both of America and Europe. But amidst this plenty, every thing is very dear, the price being four or five times as much as at Quito, bread only excepted. Wine, oil and dried fruits, are some of the cheapest. The poorer class however, as the negroes and other castes, live tolerably well, fish, which is little esteemed by
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the opulent, selling at a low price; the same may be said of mutton and beef, with regard to the inhabitants of this country in general.

SWEETMEATS are also here in the same plenty as in the other parts of South America, tho' seldom eaten, except as deserts, and even then very moderately. Instead of chocolate, Mate, or Paraguay tea is generally used, and prepared twice a day. Though this has here the defect already observed, it is better prepared than in any other part.

CHAP. X.

Trade and Commerce of LIMA.

THE city of Lima could not have attained to such splendor, if, besides being the capital of Peru, it had not been also the general staple of the kingdom. But as it is the residence of the government and chief tribunals, so it is also the common factory for commerce of every kind, and the center of the products and manufactures of the other provinces, together with those of Europe, brought over in the galleons or register ships; and from hence they are distributed through the vast extent of these kingdoms, whose wants are supplied from Lima, as their common mother. At the head of this commerce is the tribunal del Consulado, which appoints commissaries to reside in the other cities of its dependencies, extending through all Peru.

ALL the wealth of the southern provinces, is brought to Lima, where it is embarked on board the fleet, which, at the time of the galleons sails from Callao, to Panama. The proprietors of the treasure, commit it to the merchants of Lima, who traffic at the fair with this and their own stock. The same fleet returns to the harbour of Païta, where

where the European merchandizes of value purchased at Porto Bello fair are landed, in order to avoid the delay of sailing to Callao, and sent by land to Lima, on droves of mules; but those of less value are carried thither by the same ships.

ON the arrival of these commodities at Lima, the merchants remit to their correspondents such parts as they had a commission to purchase, reserving the rest in ware-houses to dispose of on their own account to traders, who at this time resort to Lima; or send them to their factors in the inland provinces, who remit the returns in money or bills of exchange to their principals at Lima. These consignments are repeated till they have disposed of their whole stock. Thus the cargo of a flotilla lasts a considerable time, there being no immediate vent for the whole.

THE produce of the sales in the inland parts of the kingdom, is sent to Lima in bars of silver, and Pignas†, and is coined at the mint in this city. Thus the traders have not only a great profit in the sale of their goods, but also in the returns of their silver, which they take at a lower rate than is allowed them for it. All these sales may therefore be considered as an exchange of one commodity for another; for he who sells the goods agrees both with regard to their price, and the rate in which he is to take the silver bars, or pignas; and thus two species of trade are transacted at the same time, one a sale of goods, and the other of silver.

THE remittances sent to Lima during the interval between the Flotillas, are laid out in manufactures of the country, great quantities of which come from the province of Quito; and this trade is carried on in all respects like the former; for the consumption of them being equal or rather larger;

† Pignas are porous and light masses of silver, being an amalgama of mercury and dust taken out of the mines.

they

they are not less necessary here than in Europe, being worn by all the lower class of people, who cannot afford the price of European stuffs; and the generality of traders who come to Lima purchase stuffs of both kinds, that they may be provided with assortments for customers of all ranks.

BESIDES this commerce, which is the most considerable, and transacted wholly by means of this city, Lima has also its particular trade with the kingdoms both of north and south America. The most considerable commodity received from the former is snuff, which is brought from the Havannah to Mexico, and after being there improved is forwarded to Lima, and from thence sent into the other provinces. This trade is carried on nearly in the same manner as that of Panama; but those who deal in this commodity, never trouble themselves with any other except perfumes, as ambergrise, musk, &c. and porcelain ware. Some of these traders are settled at Lima, others reside there occasionally, but are in general factors to the merchants at Mexico. Lima also receives from the ports of new Spain, Naphtha, tar, iron, and some indigo for dying.

THE kingdom of Terra Firma sends to Lima leaf-tobacco, and pearls, which here meet with a good market; for besides the great numbers worn by the ladies, no mulatto woman is without some ornament or other made of them. During a free assiento of negroes, this commerce is always carried on by way of Panama, and to a considerable amount.

THE ladies, and indeed women of all ranks, have a very antient custom, namely, the carrying in their mouths a Limpion, or cleanser, of tobacco. The first intention of this was to keep the teeth clean, as the name itself intimates. These Limpions are small rolls of tobacco, four inches in length, and nine lines in diameter, and tied with a thread, which they untwist as the Limpion wastes. One end of they this put
into

their mouth, and after chewing it for some time, rub the teeth with it, and thus keep them always clean and white. The lower class of people, who generally pervert the best things, carry this custom to such excess, as to keep continually in their mouths a roll of tobacco, an inch and a half in diameter; affecting to distinguish themselves by the largeness of their Limpions, tho' it absolutely disfigures them. This custom, together with that of smoaking, which is equally common among the men, occasions a great demand for leaf tobacco. The Limpions are made of Guayaquil tobacco mixed with some of that brought from the Havannah to Panama; but that used in smoaking comes from Santa Mayobamba, Jaen de Bracamoros, Llulla, and Chillaos, where it grows in the greatest plenty, and is best adapted to that purpose.

ALL the timber used in building houses, refitting ships, or building small barks at Callao, is brought from Guayaquil, together with the Cacao; but the consumption of the latter is here very small, the Paraguay tea being more generally used. The timber trade is carried on by the masters of ships, who bring it hither on their own account, as we have already observed, in describing Guayaquil, and depositing it in store-houses at Callao, sell it as opportunity offers.

THE coasts of Nasca and Pisco, send to Lima, wine, brandy, raisins, olives and oil: and the kingdom of Chili, wheat, flour, lard, leather, cordage, wines, dried fruits, and some gold. Besides these all sorts of goods are also laid up at Callao, in store-houses built for that purpose; some on account of the owners who remit them, others for masters of ships who purchase them on the spot where they grow, or are made. Every Monday during the whole year there is a fair at Callao, whither the proprietors and dealers resort from all parts; and the

the goods are carried according to the buyers direction on droves of mules kept there for that purpose by the masters of the warehouses, and whose profit wholly consists in the hire of these beasts.

THE provisions brought to Lima are not only sufficient to supply its numerous inhabitants, but great quantities of all kinds are sent to Quito, and its jurisdiction, to Valles and Panama. Copper and tin in bars are brought from Coquimbo; from the mountains de Caxamarca, and Chacapoyas, canvas made of cotton for sails and other stuffs of that kind, and also of Pita: Cordovan leather, and soap are made all over Valles. From the southern provinces, as Plata, Oruro, Potosi, and Cusco, is sent Vicuna wool for making hats, and some stuffs of a peculiar fineness. Lastly, from Paraguay the herd called by that name is sent, of which there is an amazing consumption, it being sent from Lima among the other provinces, as far as Quito. There is no province in Peru, which does not remit to Lima, its products and manufactures; and supplies itself from hence with the necessary commodities. Thus Lima is the emporium to which people resort from all parts; and trade being always in a constant circulation, besides the continual resort of strangers, the families of rank are enabled to support the expences of that splendor I have already mentioned; for without such continual assistance they must either contract their expences, or fall victims to their ostentation.

It would naturally be imagined that by a commerce so extensive and important, many vast fortunes must be acquired, especially as every branch of it is attended with great profits; but if there are some who actually do acquire great riches, neither their number nor opulence are equal to what might be expected; for by a narrow inspection there will hardly be found above ten or fifteen houses of trade, exclu-

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five of immoveables as lands and offices, whose stock in money and goods amounts to five or six hundred thousand crowns; and to one that exceeds this sum, there are more that fall short of it. Many possess from one to three hundred thousand crowns, and these are indeed the persons who compose the main body of trade. Besides these there are great numbers of inferior traders, whose capitals do not exceed fifty or a hundred thousand crowns. The paucity of immense fortunes amidst such advantages is doubtless owing to the enormous expences; whence, though their gains are great, they can hardly support their credit; so that after paying the fortunes of their daughters, and the establishing their sons, the wealth of most families terminates with the life of him who raised it, being divided into as many small stocks as he had dependents; unless some either by industry or good fortune, improve the portion they obtained by inheritance.

THE inhabitants of Lima have a natural disposition and aptitude for commerce, and the city may be considered as an academy to which great numbers repair to perfect themselves in the various arts of trade. They both penetrate into the finesses of the seller; and artfully draw the purchaser into their views. They are blessed with a remarkable talent of persuasion, at the same time that they are incapable of being persuaded, as well as of artfully eluding objections. They affect to slight what they are most desirous of purchasing, and by that means often make very advantageous bargains, which none can obtain from them. But after all these precautions and finesses in buying and selling, for which they are so distinguished, none are more punctual and honourable in performing their contracts.

BESIDES the shops where stuffs and goods of that kind are sold; there are others for snuff, and in these may be purchased the wrought plate, which is bought
in

in the cities near the mines, where it is made.

THE wholesale traders, who have large warehouses, are not above keeping shops where they sell by retail, which is reckoned no disgrace; and thus they gain that profit which they must otherwise allow to others. And from this indulgence granted to every branch of commerce, it flourishes very greatly. There are, however, many families, who, as I have already observed, support a proper splendor entirely by the revenue of their estates, without joining in the cares and hurry of commerce. But a greater number with estates, add the advantages of commerce, in order to preserve them. These, however, deal only at the fairs of the galleons, and in other large branches of commerce; and find the benefit of having abandoned those scruples brought by their ancestors from Spain, namely, that trade would tarnish the lustre of their nobility.

CHAP. XI.

Extent of the jurisdiction of the Vice-roy of PERU: together with the audiences and dioceses of that kingdom.

THE foregoing accounts naturally lead to the extent of the audience of Lima, and the jurisdiction of the vice roy of Peru. But such a particular description as I have already given † of Quito, requiring a personal knowledge of all its provinces and jurisdictions, and also a particular work, from the extensiveness of the subject, I shall confine myself to some principal accounts, but which will convey an adequate idea of the vast dominions of this country. In order to this I have consulted several persons, some

of which have been vested with high employments here, and others, whose commendable curiosity, as natives of this country, had prompted them to acquire an exact knowledge of it. This was a resource of absolute necessity; no opportunity having offered of visiting the inland parts of these countries; and the accounts we received of them at Lima, were not to be depended upon, with that confidence necessary to their being inserted here; for considering the vast distance between the capital and some provinces, it is no wonder they are but little known at Lima. The reader will therefore indulge me in giving a superficial account of some; for according to the method in which I began to write the history, we shall insert such particulars only as are authentic; it being undoubtedly more advantageous to say a little with truth, than to engage in prolix and uncertain particulars.

IN order the better to describe the countries governed by the vice-roy of Peru, without departing from the plan hitherto observed, I shall divide the whole jurisdiction of its government, into those audiences of which it consists; these into the diocesses they contain; and the diocesses into jurisdictions under a Corregidor.

THE vice royalty of Peru in south America, extends over those vast countries, included in the jurisdictions of the audiences of Lima, Los Charcas, and Chili; and in these are comprehended the governments of Santa Cruz de la Sierra; Paraguay, Tucuman, and Buenos Ayres. Though these three provinces and the kingdom of Chili have particular governors invested with all the authority agreeable to such a character; and as such are absolute in political, civil, and military affairs, yet, in some cases, are subordinate to the vice-roy; for instance, on the death of any inferior governor, the vacancy is supplied by him. Before the erection of the vice-royalty

royalty of the new kingdom of Granada in 1739, that of Peru, as we have already observed, extended to the countries of the two audiences of Terra Firma and Quito; but those being then separated from it, the bounds of it on the north were the jurisdiction of Piura, which extends to those of Guayaquil and Loxa, and that of Chacapayas, which joins to the government of Jaen de Bracamoros. Thus the vice-royalty of Peru begins at the bay of Guayaquil, at the coast of Tumbes, in $3^{\circ} 25'$ south latitude, and reaches to the land of Magellan in 50° consequently it extends 1012 sea leagues. Eastward it partly terminates on Brazil, being bounded by the celebrated line, or meridian of demarkation, or that which separates the dominions of Spain and Portugal, and on the coast of the north sea: and on the W. is terminated by the south-sea.

THE audience of Lima erected in the year 1542, though it was the year 1544 before any session was held in that city, contains within its jurisdiction one arch-bishoprick, and four bishopricks, viz.

The archbishoprick of Lima, and the bishopricks of Truxillo, Guamanga, Cusco, and Arequipa.

The arch-bishoprick of Lima, to which the precedence in every respect belongs, shall be the subject of this chapter. It contains fourteen jurisdictions, which I shall treat of in the order of their situation, beginning with those nearest the capital, and concluding with those which are most remote: the same method shall also be observed in the other diocesses.

I. The Curcado or circuit of Lima.

II. Chancay.

IX. Yauyos.

III. Santa.

X. Caxatambo.

IV. Canta.

XI. Sarma.

V. Canete.

XII. Jouxá.

VI. Ica, Pisco, and Nasca.

XIII. Conchucos.

VII. Guarachia.

XIV. Guyalas.

VIII. Guanuco.

XV. Guamalies.

I. II.

I. II III. The jurisdiction of Lima, Chancay, and Santa have been already described in Chap. III.

IV. THE jurisdiction of Canta begins at the distance of five leagues N. N. E. of Lima, where it terminates on the Circado of that city. It extends above thirty leagues, and the greater part of them taken up by the first branch of the Cordillera of the Andes; so that the temperature of the air is different in different parts of the country; that part which lies low, or among the valleys being hot, those on the skirts of the mountains, which are also intermixed with some plains, temperate; and those in the upper parts of the mountains cold. This difference of air is of great advantage both to the fruits of the earth and pastures; for by appropriating every species to its proper degree of heat, the produce is large, and exceeding good. Among all the fruits the Papa is particularly distinguished, and the roots carried to Lima where they meet with a good market. The vast fields of Bombon, part of which belongs to this jurisdiction, are by their high situation, always cold; yet they afford pasture for innumerable flocks of sheep. These extensive tracts of land are divided into Haciendas, or estates belonging to noble families of Lima. At Guaman-tanga, one of the towns in this jurisdiction is a miraculous crucifix, devoutly worshipped; the inhabitants of Lima, and the neighbouring country, go thither in pilgrimage at Whitsuntide to assist at a festival, instituted particularly in honour of it.

V. THE town of Canete is the capital of the jurisdiction of its name. Its jurisdiction begins at the distance of six leagues south from Lima, and extends along the coast in the same rhumb above thirty leagues. The temperature of the air in this jurisdiction is the same with that in the valleys of Lima; and the country being watered by a large river, and other lesser streams, produced vast quantities

ties of wheat and maize. Great part of the lands are planted with canes, from whence they extract an excellent sugar. These profitable tracts of land belong also to noble families. In the neighbourhood of Chilca, situated about ten leagues from Lima, is found salt petre of which gunpowder is made at that city. Besides these advantages it has a good fishery, which affords a comfortable subsistence to the Indian inhabitants of the towns, particularly those situated near the sea coast; together with plenty of fruits, pulse, and poultry, the breeding of which is another occupation of the Indians. Whence a large trade is carried on between this jurisdiction and Lima.

VI. Ica, Pisco, and Nasca are three towns which denominate this jurisdiction; one part of it runs along the coast southward, and its territories extend above 60 leagues; but are intermixed with some deserts, and the country being sandy, those parts which are beyond the reach of the trenches cut from the rivers are generally barren. I say generally, because there are some tracts, which, without the benefit of an artificial watering, are planted with vines, and produce excellent grapes, the roots being supplied with moisture from the internal humidity of the earth. Great quantities of wines are made from them, and chiefly exported to Callao, and from thence to Guayaquil and Panama; also to Guamanga, and other inland provinces: they also extract from these wines great quantities of brandy. Some parts of this jurisdiction are planted with olive-trees, which produce excellent fruit either for eating, or oil. The fields, which are watered by the trenches, yield an uncommon plenty of wheat, maize, and fruits. The jurisdiction of Ica is remarkable for spacious woods of Algarrobales or carob-trees, with the fruit of which the inhabitants feed vast numbers of asses, for the uses of agriculture. The Indians who live near the sea apply themselves

selves to fishing, and after salting carry it to the towns among the mountains, where they never fail of a good market.

VII. THE jurisdiction of Guarachiri contains the first chain and part of the second of the mountains, extending itself along these chains above forty leagues. This province begins about six leagues east of Lima. From the disposition of its parts, those places only which lie in the valleys and in the breaches of the mountains are inhabited; and these are very fertile, producing great quantities of fruit, wheat, barley, maize, and other grain. In its mountains are several silver mines, though but few of them are wrought, being none of the richest.

VIII. GUANUCO is a city and the capital of its jurisdiction, which begins forty leagues north-east of Lima. This city was formerly one of the principal in these kingdoms, and the settlement of some of the first conquerors; but at present in so ruinous a condition, that the principal houses where these great men lived remain as it were only monuments of its former opulence. The other parts of it can hardly be compared to an Indian town. The temperature of the air in the greatest part of its territories is very pure and mild; and the soil fruitful. Several kinds of sweetmeats and jellies are made here, and sold to other provinces.

IX. THE jurisdiction of Yaayos, begins twenty leagues south-east from Lima, and takes up part of the first and second chain of the Cordilleras; consequently the temperature of the air is different in different parts. The greatest length of this jurisdiction is about thirty leagues, and abounds in fruits, wheat, barley, maize, &c. whilst other parts are continually clothed with verdure, and feed numerous herds and flocks for the markets of Lima; and these are the most considerable articles of its commerce.

X. The jurisdiction of Caxatambo, which begins

35 leagues north of Lima, extends about 20 leagues and partly among the mountains, whence the temperature of the air is various; but the whole territory is very fertile in grain. It has also some silver mines, which are worked, and the Indians have manufactures of bays, which make part of the trade of this jurisdiction.

XI. The jurisdiction of Tarma is one of the largest in this archbishoprick. It begins forty leagues north-east from Lima, and terminates eastward on a tract of land inhabited by wild Indians, called Maran-cochas, who often make inroads into the territories of this jurisdiction. The difference of the air in its several parts, render it capable of producing all kinds of grain and fruits, which the inhabitants are not wanting to improve. The temperate parts are sown with wheat, barley, maize, and other grain; while the colder parts afford pasture to infinite numbers of cattle of all kinds. This province is also rich in silver mines; and as many of them are worked, they spread affluence all over the country. Besides these important sources of commerce, and that of the cattle, the making of bays and other coarse stuffs, profitably employ great numbers of Indians in most of its towns.

XII. The jurisdiction of Jauxa borders on the southern extremity of the former, and begins about forty leagues east of Lima, and extends forty more along the spacious valleys and plains between the two Cordilleras of the Andes. In the middle of it runs a large river, called also Jauxa, the source of which is in the lake of Chincay-Cocha, in the province of Tarma. It is also one of the branches of the river of the Amazons. The whole jurisdiction of this province is divided into two parts by the river, and in both are several handsome towns, well inhabited by Spaniards, Mestizos, and Indians. The soil produces plenty of wheat and other grain, together with a great variety of fruits. It has also a considerable share of trade, being the great road to the provinces of Cusco, Paz, Plata,

Plata, and others to the southward, here called Tierra de Ariba, or the upper country. Like the former it borders eastward on the wild Indians of the mountains; but among which the order of St. Francis has established several missions, the first being in the town of Ocopa. Within its dependances are several silver mines, some of which being worked, greatly increase the riches of this province.

XIII. The jurisdiction of Conchucos begins forty leagues N. N. E. of Lima, and extends along the center of the Cordillera; so that its air is different according to the height of the situation of its several parts, the mildest of which produce all kinds of grain and fruits, and the others, where the effects of the cold checks this fertility, afford pasture for cattle of all kinds. In this jurisdiction are great number of looms; the principal occupation of the Indians being several kinds of woollen manufactures, and these constitute the greatest part of its commerce with other provinces.

XIV. THE province of Guaylas, like the former, extends along the center of the Cordillera, beginning fifty leagues from Lima, and in the same direction as the other; this jurisdiction is large, and has different temperatures of air. The low parts produce grain and fruits, the upper abound in cattle and sheep, which form the greatest branch of their trade.

XV. The last is that of Guamalies, which, like the former, is situated in the center of the Cordillera, consequently its air very different. This jurisdiction begins eighty leagues N. E. of Lima, and its situation being rather cold than temperate, few places are fertile in its whole extent, which is above forty leagues. The Indian inhabitants of the towns apply themselves to weaving, and make a great variety of bays, serges, and other stuffs, with which they carry on a very considerable trade with the other provinces, destitute of such manufactures.

THE preceding provinces, together with the follow-

ing in the audience of Lima, as in those belonging to that of Charcas, are full of towns, villages and hamlets, inhabited by Spaniards, Mestizos, and Indians; but with some difference, the number of Spaniards being greater in some, and in others that of the Indians. Many of them are indeed solely inhabited by the latter. The distance from the capital of the province, especially to the towns situated on its frontiers, being so great, as to render it impossible for the corregidor to discharge his office every where with the necessary punctuality and attention, the province is divided into several districts, consisting of three or four towns, more or less, according to their largeness and distance; and over these is placed a delegate.

EVERY settlement of any consequence maintains a priest; and so commendable is their provision in this respect, that sometimes two, three, or more small places join to support one, either alone or with a curate; so that some ecclesiastics have distant settlements under their care. These incumbents are either seculars or regulars, according to the right acquired by each of these classes, as having been employed in the conversion of the Indians immediately after the Conquest.

CHAP. XII.

Of the Provinces in the Diocesses of TRUXILLO, GUAMANGA, CUSCO, and AREQUIPA.

NORTH of the archiepiscopal diocess of Lima lies the bishopric of Truxillo, and with it terminates on that side both the jurisdiction of that audience, and the vice-royalty of Peru; but the whole extent of this diocess is not under the jurisdictions of this audience, nor of that of the vice-roy; for it also includes

includes the government of Jaen de Bracamoros, which, as we have already observed (Vol. I.) belongs to the province and audience of Quito. We shall therefore exclude it, and only give an account of the seven jurisdictions in the diocese of Truxillo belonging to the vice-royalty of Peru, and the audience of Lima.

Jurisdictions in the diocese of Truxillo.

I. TRUXILLO.

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| II. Sana. | V. Chachapayas. |
| III. Piura. | VI. Llulla, and Chilloas. |
| IV. Caxamarca. | VII. Pataz, or Coxamarquilla. |

I. II. III. A sufficient account having already been given (Chap. I. II.) of the jurisdictions of Truxillo, Sana, and Piura, it only remains to speak of the other four.

IV. Caxamarca lies to the eastward of Truxillo, and its jurisdiction extends along a vast interval betwixt the two Cordilleras of the Andes. It enjoys a fertility of all kinds of corn, fruits, and esculent vegetables; also cattle, sheep, and especially hogs, of which they sell vast numbers to the farmers in the valleys, who after fattening them with maize, send them to the markets in the great towns; particularly the farmers of the valley of Chincay and others, who drive a considerable trade in these creatures at Lima, Truxillo, and other flourishing places. The Indians throughout this jurisdiction weave cotton for ship's sails, bed-curtains, quilts, and other uses, which are sent into the other provinces. Here are also some silver mines, but of little consequence.

V. ON the same side, but more towards the east, lies the jurisdiction of Chachapoyas. Its temperature is hot, being without the Cordilleras, and to the eastward its territories have a low situation. It is of great extent, but very thinly inhabited; and the products of the earth only such as naturally flourish in such a climate. The Indians here are very ingenious in making cottons, particularly tapestry, which for the liveliness of
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the colours, and delicacy of the work, make an elegant appearance : these, together with the sail-cloth, bring great profits to this country, being highly valued in the other provinces.

VI. SOUTH of Chachapayas, and also on the eastside of the cordillera of the Andes, lies the jurisdiction of Llulla and Chiloas, which is low, warm and moist, and covered with woods, so that great parts of it are uninhabited. It borders on the river of Moyabamba, which beginning its course from these southern provinces of Peru, forms the river of the Amazonas, as we have already observed.* The principal commodity of this country is tobacco, which, with a particular kind of almonds called andes, and a few other fruits natural to its climate, form the commerce carried on by this province with the others.

VII. THE last jurisdiction of this diocese is that of Pataz, or Caxamarquilla. From its different situations it has a variety of products : but is particularly remarkable for gold mines ; its chief commerce consisting in exchanging that metal for current money, especially silver coin, which is the more esteemed here for its scarcity.

GUAMANGA the second diocese.

THE city of Guamanga, the capital of this diocese, was founded in the year 1539, by Don Francisco Pizarro, on the site of an Indian village of the same name. The Spaniards added the name of San Juan del la Victoria, in memory of the precipitate retreat of Manco the Ynca, from Pizarro, who offered him battle. This city was founded for the conveniency of the trade carried on between Lima and Cusco ; for during this long distance, there was at that time no town, whence the travellers frequently suffered by the incursions of Manco's army. This gave occasion to building the city on the spot where the Indian village stood, tho' extremely inconvenient with regard to
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* Vol. I.

provisions, as lying contiguous to the great chain of the Andes; but the war being happily terminated by the entire defeat of Manco's party, the city was removed to its present situation. Its jurisdiction, regulated at the time of its foundation, began at the frontiers of Joxa, and reached to the bridge of Valcas; but at present it is bounded by the provinces which surround it, and contains the town of Anco, about three leagues from it: The city is situated on the declivities of some mountains not remarkable for their height, which extending southward inclose a spacious plain to the eastward of the town, watered by a small stream descending from the neighbouring mountains; but the ground on which the city is built, being higher than the breach thro' which the river flows, the inhabitants were obliged to provide themselves with small fountains. Among the number of inhabitants, Guamanga boasts at least of twenty noble families, who live in the center of the town, in spacious houses of a considerable height, built partly of stone, and covered with tiles. Besides the largeness of the apartment, they have extensive gardens and orchards, tho' it is no small difficulty to keep these in order, on account of the scarcity of water. The large Indian suburbs round the city, add greatly to its extent, and the houses tho' low, are chiefly of stone, and roofed, which considerably augments the appearance of the city. This is indeed the general manner of building in the towns of this kingdom, remote from the coast.

THE cathedral is very splendid, and its chapter, besides the bishop, consists of a dean, archdeacon, chanter, two canons by composition, a penitentiary, and two prebendaries. It has a seminary for the service of the church, under the title of St. Christopher. The church of this seminary is that belonging to the parish of the Spaniards, and another dedicated to St. Ann, the parish church of the Indians. Besides these are the chapels of Carmenca, Belen, St. Sebastian, and

and St. John the Baptist depending on it. The parish of Magdalena inhabited by Indians, is under the care of the Dominicans, and the incumbent has the title of priest. The city has also an university, with professors of philosophy, divinity and law, and equal privileges with that of Lima, they being both royal foundations. The corporation is composed of the principal nobility of the city, at the head of which is the corregidor, and out of this body the Alcaldes are chosen, to superintend the civil and political government.

WITHIN the walls of this city are the convents of St. Dominic, St. Francis, the fathers of Mercy, St. Augustine, St. Juan de Dios, a college of Jesuits, a hospital of St. Francis de Paula. The nunneries are of the orders of St. Clare, and the Carmelites; and a religious sisterhood.

The jurisdictions in the diocese of Guamanga, are
I. Guamanga.

II. Guanta.

VI. Angaraes.

III. Vilcas Guaman.

VII. Castio Vineyna.

IV. Andogwaylas.

VIII. Parina-Cocha.

V. Guanca Belcia.

IX. Lucanas.

I. THE jurisdiction of Guamanga, enjoys in every part, so good a temperature, that it abounds in variety of grain, fruit and cattle, and is very populous. One part of its commerce consist in Bend leather for soles of shoes, which are cut out here. Conserves and sweatmeats are here made in great quantity.

II. THE jurisdiction of Guanta which lies N. N. W. of Guamanga, begins a little above four leagues from that city; and is in length about thirty leagues. It is very happy in the temperature of the climate, and fertility of the earth; but its silver mines, which were formerly very rich, are now greatly exhausted. In an island formed by the river Jauxa, called in that country Tayacaxa, grows in remakable plenty the Caca already mentioned in Vol. I. This herb, and the lead produced from the mines of that metal in this country,

try, are the branches of its commerce. It supplies the city of Guamanga with great part of its corn and fruits.

III. S. E. of Guamanga, and between six and seven leagues from that city is Vilcas Guaman, which extends above 30 leagues. The greatest part of this country, lying in a temperate air, besides a sufficiency of corn, and fruits, and esculent vegetables, has very fine pastures, in which are bred vast quantities of cattle of all kinds. The Indians in the towns of this jurisdiction apply themselves to weaving bays, corded stuffs, and other branches of the woollen manufactory, which are carried to Cusco, and other provinces; but this trade is rendered very laborious by the great distance of the several places. Here is still remaining a fort built by the old Indians, and resembles that already described, Vol. I. near the town of Cannar; at the town of Vilcas Guaman was another, very famous, but taken down in order to erect a church with the stones.

IV. EAST a little inclining to the S. of Guamanga is Andaguaylas, extending eastward along an intermediate space between two branches of the Cordillera, above twenty miles, having the advantage of being watered by several small rivers. Its climate is partly hot, and partly temperate, so that the soil being watered by these streams, produces all kinds of fruits and grain in great plenty, especially maize, wheat and sugar canes. This province is one of the most populous in all those parts; in it the gentry of Guamanga have large sugar plantations.

V. THE government of Guanica Belica begins thirty leagues north of Guamanga. The town which gives name to this government, was founded on account of the famous rich quicksilver mine, and to the working of it, the inhabitants owe their whole subsistence; the coldness of the air checking the growth of all kinds of grains and fruits, so
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that they are obliged to purchase them from their neighbours. This town is noted for a water where such large petrefactions are formed, that the inhabitants use them in building houses, and other works. The quicksilver mines wrought here, supply with that necessary mineral, all the silver mines of Peru; and notwithstanding the prodigious quantities already extracted, no diminution is perceived. Some attribute the discovery of these mines to a Portuguese, called Enrique Garces in the year 1566, who accidentally met an Indian with some pieces of cinnabar, called by the Indians Llimpi, and used in painting their faces. But others, among whom are Acosta, Laett, and Escalona, say that the mines of Guanica Belica, were discovered by a Navincopa, or Indian, and servant to Amador Cabrera; and that before the year 1564, Pedro Contreras and Henrique Garces had discovered another mine of the same kind at Patas. But however it be, the mines of Guanica Belica are the only ones now worked; and the use of quicksilver for aggregating the particles of silver began in the year 1571, under the direction of Petro Fernandes Velasco. The mines of Guanica Belica immediately on the discovery were claimed in the king's name, and alternately governed by one of the members of the audiencia of Lima, with the title of superintendant, whose office expired at the end of five years, till in the year 1735, when Philip V. appointed a particular governor of these mines, with the same title of superintendant, but thoroughly acquainted with the nature of extracting this mineral, having been employed in those of the same nature in Spain; and by his œconomy the mines are worked with less charge, and will not be so soon exhausted. Part of the quicksilver found here, is sold on the spot to miners, and the remainder sent to all the royal offices of the kingdom of Peru, for
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the more commodious supply of those whose mines are at a great distance.

VI. THE jurisdiction of Angaraes, depends on the government of Guanica Belica, and begins about twenty leagues W. N. W. of the city of Guamanga. Its territories reach above twenty leagues; its air is temperate, and it abounds in wheat, maize, and other grains and fruits, and also breeds vast droves of cattle of all kinds.

VII. WEST of the city of Guamanga, is the jurisdiction of Castro Virreyna. In some parts this province extends above thirty leagues, and has such a variety of temperatures, that it produces every kind of grain and fruits. The heaths which are the coldest parts, are frequented by a kind of sheep called Vicunna, whose wool is the most considerable article of its commerce. This animal was also common in the provinces of Jauxa, Guanuco, and Chuquiabo, till the conquest of those countries, when every one hunted them at pleasure for the sake of their wool, without restraint from the government, they became, as it were, exterminated in those parts; now they are only to be found in the summits of mountains or the coldest heaths, where they are not caught without great difficulty.

VIII. ABOUT twenty leagues south of the city of Guamanga, is the jurisdiction of Parina-Cocha, which reaches about twenty five leagues; and lies principally in so temperate an air, that the soil, besides excellent pastures, abounds in grain and fruits. It has also several mines both of silver and gold, which now produce more considerably than heretofore. These valuable metals make the chief branch of its active commerce; its passive being the same as in the following jurisdiction.

IX. THE jurisdiction of Lucanas begins about twenty-five or thirty leagues south-west of Guamanga. Its temperature is cold and moderate. The parts
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of the former breed large droves of all sorts of cattle; and those of the latter are fertile in grain, herbs and fruits. It also abounds in valuable silver mines, in which chiefly the riches of Peru consist, and by that means made the center of a very large commerce; great numbers of merchants resorting hither with their goods, and others for purchasing such provisions as their own countries do not afford, for which they give in exchange ingots and pinnaes of silver.

III. *Dioecesis of the audience of LIMA.*

Cusco.

OF all the cities in Peru, Cusco is the most ancient, being of the same date with the east empire of the Yncas. It was founded by the first Ynca Mango Capac, as the seat and capital of his empire. Having peopled it with the first Indians who voluntarily submitted to him, he divided it into two parts, which he called high and low Cusco, the former having been peopled by Indians which the emperor himself had assembled, and the latter by those whom his consort Mama-Oello had prevailed upon to leave their wandering manner of life. The first forms the N. and the latter the S. part of the city. The houses originally were low and small like cottages; but as the empire encreased they assumed a new appearance; so that when the Spaniards landed in these parts, they were astonished at the largeness and splendor of the city, especially the magnificence of the temple of the sun, the grandeur of the palaces of the Ynca, and the pomp and richness becoming the seat of so vast an empire. It was in the month of October 1534, when Don Francisco Pizarro entered and took possession of it in the name of Charles V. emperor, and king of Spain. This was followed by a siege of the Ynca Mango, who laid great part of it in ashes, but without dislodging the Spaniards.

THIS city stands in a very uneven situation on the sides of the mountains, there being no other more
con-

convenient near it. On a mountain contiguous to the north part of the city are the ruins of that famous fort built by the Yncas for their defence; and it appears from thence, that the design was to inclose the whole mountain with a prodigious wall, of such construction as to render the ascent of it absolutely impracticable to an enemy, and at the same time easily to be defended by those within; in order to prevent all approach to the city. This wall was entirely of free stone, and strongly built, like all the other works of the Yncas, described Vol. I. but still more remarkable for its dimensions and the largeness of the stones, which are of different magnitudes and figures. Those composing the principal part of the work are of such prodigious dimensions, that it is difficult to imagine how it was possible for the strength of man, unassisted by machines, to have brought them hither from the quarries. The interstices formed by the irregularities of these enormous masses are fill'd with smaller, and so closely joined as not to be perceived without a very narrow inspection. One of these large stones is still lying on the ground, and seems not to have been applied to the use intended, and is such an enormous mass, that it is astonishing to human reason to think by what means it could be brought thither. It is called *la Canfada*, or the troublesome, alluding probably to the labour of bringing it from the quarry. The internal works of this fortress consisting of apartments, and two other walls, are chiefly in ruins, but the outward wall is standing.

THE city of Cusco is nearly equal to that of Lima. The north and west sides, are surrounded by the mountain of the fortress, and others called *Sanca*: on the south it borders on a plain, on which are several very beautiful walks. Most of the houses are of stone, well contrived, and covered with tiles, whose lively red, gives them an elegant appearance.

The apartments are very spacious, and finely decorated, the inhabitants being noted for their elegant taste. The moldings of all the doors are gilt, and the other ornaments and furniture answerable.

THE cathedral of Cusco, both with regard to materials, architecture, and disposition, greatly resembles that of Lima, but is a much smaller structure. It is built entirely of stone, and the architecture is even thought to exceed it. The Sacristy is called *Nuestra Senora del Triunpho*, being the place where the Spaniards defended themselves from the fury of the Indians, when surrounded by the army of the *Ynca Manco*; and though the whole city was several times set on fire, the flames had no effect on this part; which was attributed to the special protection of the holy virgin. It is served by three priests, one in particular for the Indians of the parish, and the other two for the Spaniards. Besides this, Cusco also contains eight other parishes; namely,

I. *Belin*. II. The church of the general hospital, which has also its priest and its parish. III. *Santa Ana*. IV. *Santiago*. V. *San Blas*. VI. *San Christoval*. VII. *San Sebastian*. VIII. *San Geronymo*. And though the first of the two last be a league, and the second two leagues from the city, they are reckoned among the number of its parishes.

HERE is also a convent of Dominicans, the principal walls of which were formerly those of the temple of the sun, and at present the high altar stands in the very place, where once was a golden image of that planet. There is likewise at Cusco a convent of Franciscans, which is the head of that order in this province. The convents of the Augustines and the fathers of mercy in this city, are also the principal of their respective orders. The Jesuits have likewise a college here. The convent of *St. Juan de Dios* and that of the *Bethlemites*, which are both very large, are hospitals for the sick; the latter is par-

particularly appropriated to the Indians, who are there used with the greatest care and tenderness. The nunneries are those of St. Clare, St. Catherine, the barefooted Carmelites, and a Nazarine sisterhood.

THE government of this city consists of a corregidor, placed at the head of the magistrates, who are the chief nobility, and out of these are annually chosen two ordinary Alcaldes, according to the custom of all the cities in south America. The members of the cathedral chapter besides the bishop, are five dignitaries, namely, the dean, archdeacon, chanter, rector and treasurer; two canons by competition, a magistral, and penitentiary; three canons by presentation, and two prebendaries. Here are three colleges, in the first, called St. Anthony, a seminary for the service of the cathedral, are taught latin, the sciences and divinity. The second is under the direction of the Jesuits, where these fathers instruct youths of fortune. The third, called St. Francis de Borja, belongs also to the Jesuits, and is appointed for the education of the sons of Caziques, or Indian princes. The two former confer all degrees below that of doctor, and have been erected into universities.

AMONG the courts of justice, is one for the revenue, consisting of two judges. Here is also a court of inquisition, and of the croisade; together with the same offices as in the other large cities already described. Formerly this city was very full of Spaniards, and among them many noble families; but at present its inhabitants are very much declined.

Jurisdictions in the Diocese of Cusco.

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|-------------------|----------------------------|
| I. Cusco. | V. Colcaylares. |
| II. Quispicanchi. | VI. Chilques, and Masques. |
| III. Avancay. | VII. Cotabamba. |
| IV. Paucartambo. | VIII. Canas, |

VIII. Canas, and

XII. Carabaya.

Cances, or Tinta.

XIII. Afangaro, and

IX. Aymaraes.

Afilo.

X. Chumbi-Vilcas.

XIV. Apolo-Bamba.

XI. Lampa.

I. THE jurisdiction of Cusco extends two leagues; the temperature of air is various, but both the heat and cold very supportable, except in some parts where the cold is intense: these, however, afford good pasture for all kinds of cattle, whilst the valleys produce plenty of grain and fruits.

II. THE jurisdiction of Quispicanchi, begins as it were at the south gates of Cusco, stretching from E. to W. above twenty leagues. The lands belong in general to the gentry of Cusco, and produce plenty of wheat, maize, and fruits. Here are also manufactories of bays, and coarse woollen stuffs. Part of this province borders on the forests inhabited by wild Indians, and produces great quantities of Coca, which forms one of the principal branches of its commerce.

III. FOUR leagues north-east from the city of Cusco, begins the jurisdiction of Avancay, and extends above thirty leagues; the air differing in temperature according to the situation of its parts; but is in general rather hot than temperate, and, accordingly, many parts of it are taken up with large plantations of canes, which yield a very rich sugar. The lands where the air is more temperate, abound in wheat, maize and fruits, part of which are sent to the city of Cusco. In this province is the valley Xaquijaguana, corruptly called Xajaguana, where Gonzalo Pizarro was defeated and taken prisoner by Pedro de la Gasco.

IV. PAUCARTAMBO begins eight leagues east of Cusco, and is of a considerable extent. This province produced in the time of the Yncas the greatest quantity of Coca, with which it carried on a very profitable commerce; but is greatly declined since this

shrub has been planted in other provinces. The soil is equally fertile in other products.

V. THE jurisdiction of Calcaylares begins four leagues W. of the city of Cusco. The air every where excels that of all the other provinces, and, accordingly produces an exuberance of all kinds of grain and fruits. In the hottest parts called Lares, were formerly very large plantations of sugar canes, but for want of hands to cultivate them, they are at present so diminished, that instead of sixty or eighty thousand arobas, which they annually produced in the time of their prosperity, they are now reduced to something less than thirty; but the sugar is of such an excellent kind, that without any other preparation than that of the country, it is equal both in colour and hardness to the refined sugar of Europe. This diminution of its sugar, has greatly lessened the principal branch of its commerce.

VI. S. E. of Cusco, and at the distance of about seven or eight leagues, begins the jurisdiction of Chilques and Masques, extending above thirty leagues in length. The temperature of the air is proportioned to the situation of its several parts, some of which are very fertile in grain, and others feed vast numbers of cows and sheep. But besides these its commerce is greatly augmented by the woollen manufactures of the Indians.

VII. S. W. of Cusco, and about twenty leagues distance, begins the jurisdiction of Cotabamba, which afterwards extends above thirty leagues between the rivers Avancay and Apurimac: In which extent are different temperatures of air. It abounds in all kinds of cattle, and the temperate parts produce plenty of wheat, maize, and fruits. Here are also mines of silver and gold, the richness of which formerly rendered this province very flourishing; but at present their produce is greatly declined.

VIII. THE jurisdiction of Canas and Carches or
K 3 Tinta,

Tinta, begins about fifteen or twenty leagues S. of Cusco, and extends about twenty leagues in every direction. The Cordillera divides it into two parts; the highest called Canas and the lowest Canches. The latter by reason of its temperate air yields all kinds of grains and fruits; whilst the former affords pasture for very numerous flocks and herds; and in the meadows between the eminences are fed no less than twenty five or thirty thousand mules, brought thither from Tucuma to pasture. Here is a very great fair for these creatures, to which dealers resort from all parts of the diocesis. In the part called Canas is the famous silver mine Condonoma.

ABOUT forty leagues S. W. from Cusco is the jurisdiction of Aymaraes, which extends thirty farther, and like the former has different temperatures of air. The lands abound in sugar, cattle, and grain; and also in mines of gold and silver, which formerly produced large quantities of those valuable metals; but at present few of them are wrought, the country being too thinly inhabited.

X. SOMETHING more than forty leagues from Cusco, begins the jurisdiction of Chumbi Vilcas, which in some parts extends above thirty leagues, has different temperatures of air, great quantities of corn and fruits, and large herds of cattle; together with some mines of silver and gold.

XI. THE jurisdiction of Lampa begins thirty leagues S. of Cusco, and is the principal of all the provinces included under the name of Callao. Its plains are interrupted with small hills, but both abound in good pasture; and accordingly this province is particularly remarkable for its quantity of cattle, with which it carries on a very profitable trade; but the air being every where cold, the only fruits of the earth are Papas and Quincas. Another very considerable advantage are its silver mines, being very rich, and constantly worked.

XII THE

XII. THE jurisdiction of Carabaya begins sixty leagues S. E. of Cusco, and extends above fifty leagues. The greatest part of it is cold; but the valleys so warm as to produce Coca, and abounds in all kinds of fruits, grain, and pulse, together with sufficient pastures for cattle of all kinds. Here are several gold mines, and the two famous lavatories, called Lavaderos de San Juan del Oro, and Pablo Coya; also that of Monte de Ananea, two leagues from the town of Poto, where there is an office for collecting the Quintos or fifth, belonging to the king. In this province also is a river, which separates it from the mountains of the wild Indians, and is known to abound so greatly in gold, that at certain times the Caziques send out a certain number of Indians in companies from the towns in their respective districts to the banks of this river, where by washing the sands in small wells they dig for that purpose, they soon find a sufficient quantity of gold to pay the royal tribute. This kind of service they call Chichina. This province has also mines of silver, which produce vast quantities of that metal. In 1713 was discovered in the mountain of Ucuntaya a vein or stratum nearly of solid silver, which though soon exhausted, yielded some millions, and hopes have been conceived from it of meeting with others, whose riches will be of a longer continuance. This jurisdiction is also famous for the gold mine called Aporama, which is very rich, and the metal twenty three carats fine.

XIII. THE jurisdiction of Afangaro and Afilo, which lies about fifty leagues S. of Cusco, is every where cold, and consequently proper only for breeding cattle, in which, however, it carries on a very profitable trade. In the N. E. parts which border on those of Carabaya, are some silver mines, but a few of them only are worked. Some of its lands produce plenty of those roots and grains which naturally flourish in a cold air, as Papas, Quinoas, and Canaguas;

naguas; of the two last the natives makes Chica in the same manner as it is made with maize. This jurisdiction belongs to the audience of Charcas.

XIV. ABOUT sixty leagues from Cusco, on the borders of the Moxos, which are missions of the Jesuits, are others called Apolo-bamba, belonging to the Franciscans. These consist of seven towns of Indians newly converted, and who having received the doctrine of the gospel, have abandoned the savage manner in which they formerly lived. In order to render the missionaries more respected by the Indians, and at the same time to defend the latter from the insults of their idolatrous brethren, a major general is posted here, who is both a civil and military officer, administering justice, and commanding in chief the several bodies of militia formed by the inhabitants of these towns and villages.

IV. Diocese of the Audience of LIMA.

AREQUIPA.

THE city of Arequipa was founded in 1539 by order of Don Francisco Pizarro, in a place known by the same name; but this situation being found very disadvantageous, the inhabitants obtain'd permission to remove it to the valley of Quilca, where it at present stands about twenty leagues distant from the sea. The lands in its dependency having been united to the empire of the Yncas by Maita Capac, the goodness of the soil and the purity of the air induced that monarch, for the farther improvement of the country, to draw 3000 families from such adjacent provinces as were less fertile, and with these to people four or five towns.

THIS city is one of the largest in all Peru, delightfully situated in a plain, and the houses well built of stone, and vaulted. They are not all of an equal height, though generally lofty, but commodious, finely decorated on the outside, and neatly furnished within. The temperature of the air is remarkably good:
and

and though sometimes a small frost is seen, the cold is never excessive, nor is the heat troublesome; so that the fields are always cloathed with verdure and enameled with flowers, as in a perpetual spring. The inhabitants enjoy an exemption from many diseases common in other countries, partly owing to their care in keeping the streets clean by means of canals which extend to a river running near the city; and by these all the filth of the city is swept away.

BUT these pleasures and advantages are allayed by the dreadful shocks of earthquakes, to which, in common with all those parts of America, it is so subject, that it has been four times by these convulsions of nature laid in ruins; besides other small shocks not attended with such terrible consequences. The first of those was felt in 1582; the second on the 24th of February 1600, which was accompanied with an eruption of a volcano called Guayna-Patina, in the neighbourhood of the city; the third happen'd in 1604, and the last in 1725. And tho' the desolation attending the three last was not so universal, yet the publick buildings, and the most stately houses were laid in ruins.

THE city is very populous, and among its inhabitants many noble families, this being the place where most of the Spaniards settled, on account of the goodness of the air, and the fertility of the soil; as also for the conveniency of commerce at the port of Aranta, which is only twenty leagues distant. The civil, political and military government of the city is executed by a corregidor, who is placed at the head of the regidores, from which are annually chosen two ordinary Alcaldes.

THE city of Arequipa did belong to the diocess of Cusco, till the year 1609, when it was erected into a particular bishoprick on the 20th of July. The chapter besides the bishop consist of the five usual dignitaries, namely, the dean, archdeacon, chan-
tor,

tor, rector, and treasurer; three canons and two prebends. Besides the sacristy, which is served by two priests for the Spaniards, the parish of Santa Martha is appropriated to all the Indian inhabitants. Here are two Franciscan convents, one of observants, and the other of recollets, both belonging to the province of Cusco; also one of Dominicans, and another of Augustines, depending on Lima; and a monastery of the fathers of mercy, subordinate to that of Cusco. Under their respective fraternities of Lima here is also a college of Jesuits, and a convent and hospital of St. Juan de Dios. Here is a seminary for the service of the cathedral; and two nunneries; namely, one of the Carmelites, and the other of St. Catharine. A third is now building for the order of Santa Rosa. There is also at Arequipa an office of revenue, under the direction of an accomptant and treasurer; together with commissaries of the inquisition and croisades, with their subalterns, as in all the other cities.

Jurisdictions in the Diocess of AREQUIPA.

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|------------------------------|---------------|
| I. Arequipa. | IV. Caylloma. |
| II. Camana. | V. Monquegua. |
| III. Condesuyos de Arequipa. | VI. Arica. |

I. AREQUIPA, comprehends the suburbs and towns in its neighbourhood, where the climate being the same as in the city, the country is perpetually covered with flowers, corn, and fruits; while the excellence of the pastures is sufficiently evident from the numbers of fine cattle fed in them.

II. ALONG the coast of the south-sea, but at some distance from the shore is the jurisdiction of Camana, which is very large, but contains many desarts, especially along the coast. Eastward it extends to the borders of the Cordillera; so that the temperature of some parts of its jurisdiction is nearly the same with that of the former, while others are cold; both producing the grain and fruits of a correspondent nature.

Its

Its principal trade consists in asses. It has silver mines near the mountains, but of little advantage, as they are not worked.

III. N. of Arequipa and thirty leagues distant from that city, is the jurisdiction of Condesuyos de Arequipa, extending about thirty leagues, with different temperatures of the air, and consequently produces grains and fruits. Here is bred the wild Cochineal, with which the Indians carry on a kind of trade with those provinces where the woollen manufactures flourish. They first pulverize the Cochineal by grinding, and after mixing four ounces of it, with twelve of violet maize, they form it into square cakes called Mango, each weighing four ounces, and sell it for a dollar per pound. This country abounds in gold and silver mines; but they are not worked with the care and diligence of former times.

IV. At about thirty leagues east from the city of Arequipa, begins Cayllóma, famous for a mountain of the same name, and the silver mines it contains. Though these mines have been long discovered and constantly and industriously worked, their produce is still so considerable, that in the principal village, called by the same name, there is a governor and office appointed for receiving the king's fifths, and vending the quicksilver used in separating the metal from the ore. The cold in the greatest part of the country is so intense, that the inhabitants are obliged to have recourse to the neighbouring provinces, for the fruits of the earth. Even the declivities of mountains and valleys produce but little. In some parts of this province are wild asses, like those already mentioned in Vol. I.

V. THE jurisdiction of Monquegua lies about forty leagues S. of the city of Arequipa, and sixteen from the coast of the south-sea. The principal town, which bears the same name, is inhabited by Spaniards, and among them several noble and opulent families.

This jurisdiction extends at least forty leagues in length, and in a happy climate, adorned with large vineyards, from the produce of which great quantities of wine and brandy are made; these constitute its whole commerce, supplying all the provinces bordering on the Cordilleras as far as Potosi, by land carriage; while they are exported by sea to Callao, where they are greatly valued. Here are also Papas and Olives.

VI. THE last jurisdiction of this diocese is Arica, which extends along the coast of the south-sea. Besides the heat, and inclemency of the air, the greatest part of the country is barren, producing only Aji, or Guinea pepper, from which alone it drives a very advantageous trade, as may easily be imagined from the vast consumption of it in all these parts of America. Accordingly the dealers in this commodity resort hither from the provinces on the other side of the mountains, and by computation, the annual produce of these plantations amount to no less than 60000 dollars per annum. The pods of this pepper are about a quarter of a yard in length, and when gathered are dried in the sun, and packed up in bags or rushes, each bag containing an aroba, or quarter of a hundred weight; and thus they are exported to all parts of the kingdom, and used as an ingredient in most of their dishes. Other parts of this jurisdiction are famous for vast quantities of large and excellent olives, far exceeding the finest produced in Europe, being nearly as large as a hen's egg. They extract some oil from their olives, and find a good market for it in the provinces of the Cordillera; others are pickled, and some, together with a small quantity of oil, exported to Callao.

CHAP. XIII.

Of the Audience of CHARCAS.

THE province of Charcas, in the extent of its jurisdiction, is equal to that of Lima; but with this disadvantage, that many of its parts are not so well inhabited, some being full of the vast deserts and impenetrable forests; while others are full of vast plains intercepted by the stupendous heights of the Cordilleras, so that it is inhabited in those parts only which are free from these inconveniences. The name of Charcas formerly included many populous provinces of Indians, whom the Ynca Capac Yupanqui subjected to his empire; but he carried his arms no farther than the provinces of Tutyra and Chaqui, where he terminated his conquests towards Calafuyo. On the death of this monarch his son Ynca Roca, the sixth in the succession of those emperors, pushed his conquests farther in the same part, till he became sovereign of all the intermediate nations to the province of Chaquisaca, where was afterwards founded the city of Plata, at present the capital of the whole province of Charcas. Its jurisdiction begins on the north side, at Vilcanota, belonging to the province of Lampa in the diocese of Cusco, and reaches southward to Buenos Ayres. Eastward it extends to Brasil, being terminated by the meridian of demarcation; and westward part of it reaches to the south-sea, particularly at Atacama, the most northern part of it on this side. The remainder of Charcas borders on the kingdom of Chili. These vast tracts of land give one archbishop and five bishops his suffragans, namely,

The archbishop of PLATA.

Bishopricks.

I. La Pas.

II. Santa Cruz de la Sierra.

III. Tu-

icated to St. Francis Xavier, the chairs of which are filled indifferently either by secular clergy or lay men; but the rector is always a Jesuit. Here are also two other colleges in which lectures of all kinds are read. That of St. John is under the direction of the Jesuits; while the archbishop nominates to that of St. Christopher, which is a seminary.

Two leagues from Plata runs the river Cachimayo along the plains, having on its banks several pleasant seats of the inhabitants; and about six in the road leading to Potosi, is the river of Philco-mayo, which is passed over by a large stone bridge. During some months of the year this river furnishes the city of Plata with great plenty of delicious fish; among which is one called the Dorado, which generally weighs between twenty and twenty five pounds. The other provisions, as bread, flesh and fruits, are brought from the adjacent provinces.

THE chief tribunal in Plata is that of the Audience, erected in the year 1559, and whose president has the titles of governor and captain-general of the province, exclusive of the governments of Santa Cruz de la Sierra, Tucuman, Paraguay and Buenos Ayres, which are independent, and in military cases absolute. It has also a Fiscal, a protector-fiscal of the Indians, and two supernumerary auditors.

THE magistracy or corporation, as in all other cities of this country, consists of regidores, who are persons of the first distinction, with the Corregidor at their head, and from them are annually chosen two ordinary Alcaldes, for maintaining order and the police. Plata was erected into a bishopric in 1551, the place having then the title of city; and in the year 1608 was raised to a metropolis. Its chapter consists of a dean, archdeacon, chantor, treasurer and rector; five canons, four prebendaries and four minor prebendaries. The archbishop and his chancellor constitute the ecclesiastical tribunal.

HERE

HERE is also a tribunal of Croisade, with a commissary, subdelegate, and other officers: likewise a court of inquisition subordinate to that of Lima, and an office for taking care of the effects of persons dying intestate; all established on the same foundation with those in other cities already mentioned.

THE jurisdictions belonging to the archbishopric of Plata, are the fourteen following:

I. THE city of Plata, and Imperial Town of Potosi.

II. Tomina.

IX. Cochabamba.

III. Porco.

X. Chayantas.

IV. Tarija.

XI. Paria.

V. Lipes.

XII. Carangas.

VI. Amparaes:

XIII. Cuacica.

VII. Oruro.

XIV. Atacama.

VIII. Pilya, and Paspaya.

I. THE jurisdiction of the city of Plata is of such prodigious extent, as to include the imperial town of Potosi, which is the continual residence of the Corregidor. There also is established the office of revenue, which consists of an accountant and treasurer, with clerks; as most convenient on account of its vicinity to the mines, for taking account of the silver produced by them.

THE famous mountain of Potosi, at the foot of which on the south side stands the town of the same name, is known all over the commercial world, as having been greatly enriched by the silver it produces. The discovery of these immense mines happened in the year 1545, by an accident seemingly fortuitous. An Indian, by some called Gualca, and by others Hualpa, pursuing some wild goats up this mountain, and coming to a part very steep, he laid hold of a small shrub in order to climb it with the greater celerity; but the shrub being unable to support his weight came up by the roots, and discovered a mass of fine silver; and at the same time

dedicated to St. Francis Xavier, the chairs of which are filled indifferently either by secular clergy or lay men; but the rector is always a Jesuit. Here are also two other colleges in which lectures of all kinds are read. That of St. John is under the direction of the Jesuits; while the archbishop nominates to that of St. Christopher, which is a seminary.

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he found some lumps of the same metal among the clods which adhered to the roots. This Indian, who lived at Porco, hastened home with these first fruits of his discovery, washed the silver and made use of it, repairing when his stock was near exhausted, to his perpetual fund. At length an intimate friend of his called Guanca, observing such a happy change in his circumstances, was desirous of knowing the cause, and urged his questions with a warmth, that Gualca was unable to deny. For some time they retired in concert to the mountain for fresh supplies of silver, till Gualca refusing to discover his method of purifying the metal, Guanca revealed the whole secret to his master Villaruel, a Spaniard who lived at Porco. Immediately on this information he went on the 21st of April 1545, to view this fortunate breach in the mountain, and the mine was without delay worked, with immense advantage.

THIS first mine was called the discoverer, as having been the occasion of discovering other sources of riches inclosed in the bowels of this mountain; for in a few days another was found equally rich, and called the Tin mine: since that another has been discovered, and distinguished by the name of Rica, as surpassing all the rest: and was succeeded by the Mendieta. These are the principal mines of Potosi, but there are several smaller crossing the mountain on all sides. The situation of the former of these mines is on the N. side of the mountain, their direction being to the S. a little inclining to the W. and it is the opinion of the most intelligent miners in this country, that those which run in these directions are the richest.

ON a report of these important discoveries people from all parts retired to Potosi, particularly from the city of Plata, which is situated about twenty five leagues from the mountain; so that at present, be-
sides

sides its extraordinary riches, having among its inhabitants many noble families, particularly those concerned in the mines, the circuit of the town is near two leagues. The air of the mountain being extremely cold and dry, renders the adjacent country remarkably barren, producing neither grain, fruits, herbs, or other esculents. The town, however, is so plentifully provided as to enjoy an abundance of every kind; and the trade for provisions is greater here than in any other place, that of Lima alone excepted. Nor will this appear at all strange if the great number of people employed in the mines be considered. Some provinces send the best of their grain and fruits; others their cattle; others their manufactures; and those who trade in European goods resort to Potosi, as to a market where there is a great demand, and no want of silver to give in exchange.

BESIDES this commerce, here are a set of persons called *Aviadores*, who find their account in advancing to the masters of the mines coined silver to pay their necessary expences, receiving in exchange silver in ingots and pinnae. Another article of great consequence is the trade of quicksilver for the use of these mines: but this branch the crown has reserved to itself. The vast consumption of this mineral may in some measure be conceived by the great quantity of silver produced by these mines; for before the invention of extracting the silver with less mercury, a mark of that mineral was consumed in obtaining a mark of fine silver; and often by the ignorance of the workmen, a still greater quantity; but the immense consumption of quicksilver in the mines of this mountain, and the riches extracted from it, will best appear from the following accounts, of two authors, who were perfectly masters of the subject, The first is that of the Rev. Alonso Barba, parish priest in the imperial town of

Potosi, who, in a piece on metals published in the year 1637, says, that from the year 1574, when mercury was first used here in extracting the silver, the royal office of Potosi has received, above 204700 quintails of mercury, exclusive of what had been clandestinely bought by private persons, and which amounted to no small quantity. And as this was consumed in the space of sixty three years, the annual amount is about 3249 quintails. The second account is given us by don Gasper de Escalona, who in his *Gazophilacio Perubico* (fol. 193.) declares, from very good authority, that before 1638, it appeared by the public accounts, that the produce of the silver amounted to 395619000 dollars, which in ninety three years, the time it had then been discovered, amounted to 41255043 dollars per annum. Hence an idea may be formed of the vast commerce, which has for many years been carried on in this town, and which is still like to continue for a long time: such enormous sums being annually bartered for goods sent hither, its whole trade consisting in silver extracted from this mountain; and if some diminution has been perceived in its produce, it is still very considerable.

AT a small distance from Potosi are the hot medicinal baths called Don Diego, whither some resort for health, and others for diversion.

THE jurisdiction of Tomina, begins about eighteen leagues S. E. from the city of Plata, borders eastward on a nation of wild Indians called Chiriguano. The climate is hot, and consequently its products are such as are common to hot countries. Some parts have vine-yards; and in others are made considerable quantities of sugar. It abounds also in cattle and sheep. The extent in some parts is near forty leagues. The vicinity of the Chiriguano is a continual uneasiness to the towns in this jurisdiction, and even to the city of Plata itself, they having more than once attempted to surprize it.

III. THE jurisdiction of Porco begins at the W. side of the town of Potosi, and about 25 leagues distance from the city of Plata; extending about 20 farther. The coldness of its situation occasions a scarcity of grain and fruits; but, on the other hand, it abounds in fine cattle of all sorts. In this jurisdiction is the mountain of Porco, whence it has its name, and from whose mines the Yncas, as I have already observed, extracted all the silver for their expences and ornaments; and accordingly was the first mine worked by the Spaniards after the conquest.

IV. ABOUT 30 leagues S. of Plata lies the jurisdiction of Tarija, or Chichas, the greatest extent of which is about 35 leagues. The temperature of the air is various, being in some parts hot, and in others cold; whence it has the advantage of corn, fruits, and cattle. This country every where abounds in mines of gold and silver, and especially that part called Chocayas. Between this province and the country inhabited by the wild Indians, runs the large river Tipuanys, the sands of which being mixed with gold, are washed like those of the river Caravaga, already mentioned.

V. IN the same part as the former, but with a small inclination towards the S. W. is the jurisdiction of Lipes, and extends also thirty-five leagues. The air is extremely cold, so that grain and fruit thrive very little here; but it abounds in cattle, particularly those natural to the country, as the Vicuna, Alpaca, or Taruga, and the Llama. It must, however, be observed, that these creatures are common to all the other provinces of Punas, that is, to those where the heaths and mountains are of such a height, as to render the air continually cold. Here are also mines of gold, but at present forsaken, tho' the remains of the old works are still visible, particularly in one of the mountains near Colcha, known by the name of Abetanis, which in the Indian language signifies a

golden mine. That of St. Christopher de Acochala was formerly one of the most famous in all Peru, for the richness of its silver mines, the meal being in some parts cut out with a chisel; but now very greatly declined; which may in a great measure be imputed to a want of people for working them; it being highly probable that the same work would still produce nearly an equal quantity of that valuable metal.

VI. THE jurisdiction of Amparaes begins at a little distance to the eastward of the city of Plata, and is terminated on the E. by the jurisdictions belonging to the dioceses of Santa Cruz de la Sierra, particularly on that of Misquepocona; and the corregidor of the province of Amparaes has the cognizance of the Indian inhabitants of Plata. Its warm parts abound in grain, particularly barley, which together with the numerous droves of cattle in the colder parts, constitute the chief branch of its trade.

VIII. N. W. of Plata is the province of Oruro, whose capital San Phelipe de Austria de Oruro is 30 leagues distant from it. The greatest part of this jurisdiction is so cold as to deny it any esculent vegetables; but on the other hand it feeds numerous flocks and herds, besides great numbers of cattle peculiar to the country, as Vicunas, Guanacos, and Llamas. Here are also many gold and silver mines; the former, tho' known even in the time of the Yncas, have been seldom worked; but those of silver have yielded great riches to the inhabitants of the province. They are now however, according to all appearance, under an irremediable decay, being overflowed, and all the endeavours hitherto used, in order to drain them, have proved ineffectual; so that those of any consideration at present are in the mountains of Popo, about twelve leagues from the town, which is large and very populous, from the trade carried on there with the mines. It has a revenue office for collecting the fifths belonging to the crown.

VIII. THE province of Pilaya and Paspaya, or Cinti, lies S. of Plata, distance about 40 leagues. The greatest part of its jurisdiction being among the breaches of the mountains, is the better adapted for producing all kinds of grain, pulse, and fruits; which, with the great quantity of wine made here, enable it to carry on a very lucrative commerce with the other provinces, which are not so happily situated.

IX. THE province of Cochabamba, lies fifty leagues S. E. of Plata, and fifty six from Potosi. Its capital is one of the most considerable cities in Peru, with regard to largeness, and the number and wealth of its inhabitants. The province in some directions extends above forty leagues. Besides the situation of the city in a most fertile plain, the whole country is so fertilized by the many rivers and streams, which every where traverse it, that this province is esteemed the granary of the whole archbishopric, and even of the diocesis de la Paz. The air also is in most parts very mild and pure; and in some spots silver mines have been discovered.

X. ABOUT fifty leagues N. W. from the city de la Plata, lies the province of Chayanta extending in some parts about forty leagues. This country is very famous for its gold and silver mines. The former are indeed at present discontinued, tho' the ancient subterraneous passages are still open. This province is watered by the river Grande, in whose sand considerable quantities of gold dust, and grains of that metal are found. The silver mines are still worked to great advantage; but with regard to cattle, this province feeds no more than are barely sufficient for its inhabitants.

XI. THE contiguous province to that of Chayanta, on the N. W. side of Plata, and seventy leagues distant from that city, is that of Paria, the extent of which is about forty leagues. The air here is cold, so that it produces little grain, which is in some

measure compensated by the great plenty of cattle of all kinds; and the cheeses made here, both from the milk of sheep and cows, are so highly esteem'd, that they are sent into every part of Peru: It has also some silver mines. The name of this province is derived from a very large lake, being an arm of that prodigious collection of waters called Titi-caca, or Chucuito.

XII. THE province of Carangas, begins seventy leagues W. from the city of Plata, and extends above fifty leagues. The climate of this jurisdiction is so cold, that the only esculent vegetables here are the Papa, Quinoa, and Canagua; but it abounds in cattle. Here are a great number of silver mines constantly worked; among which that called Turco is very remarkable for a sort of ore termed by miners Machacado; the fibres of the silver forming an admirable intertexture with the stone in which they are contained. Mines of this kind are generally the richest. Besides this there are others in this jurisdiction, which if not richer, are equally remarkable; and these are found in the barren sandy deserts extending towards the coast of the South Sea. And here, only by digging in the sands, are found detached lumps of silver, not mixed with any ore or stone, save what adheres in some parts to the metal. These lumps are called Papas, being taken out of the ground, in the same manner as that root. It is doubtless very difficult to account for the formation of these masses of silver, in a barren and moveable sand, remote from any ore or mine. Two conjectures may, however, be offered. The first by admitting the continual reproduction of metals, of which there are indeed here so many evident proofs; as the matrices of gold and silver, met with in many parts of this kingdom. Nay the very mines themselves, after being long forsaken, have again been worked with great advantage; but the skeletons of Indians found in old mines, and covered

covered with fibres of silver, and the inward parts also full of the same metal, seem to put the matter beyond dispute. If this be admitted, it is natural to conclude, that the primordial matter of silver is first fluid, and when it has acquired a certain degree of perfection, some parts of it are filtrated through the pores of the sand, till stopping in a place proper for completing the fixation, they there form a solid congeries of silver.

THO' this conjecture be not destitute of probability, yet I am more inclined to embrace the second, as it is, in my opinion, more simple and natural. Subterraneous fires being very common in these parts of America, as I have already observed in speaking of the earthquake, their activity is doubtless so strong as to melt any metals deposited near the places where they begin; and to communicate to them a heat sufficient for keeping them a long time in a state of fusion, and hence a portion of silver thus melted necessarily spreads, and introduces itself through the larger pores of the earth, and continues to expand itself, till being beyond the reach of the heat, it fixes, and re-assumes its former consistency, together with other heterogeneous substances collected in its passage. To this hypothesis, two objections may be offered; one that the metal in fusion by changing its situation, must be exposed to the cold air, and, consequently, soon condense. The second that the pores of the earth being extremely minute, particularly in a sandy soil, the silver should rather be found in filaments, or fine ramifications, than in large lumps or pieces, as is really the case. To both these objections I shall endeavour to give a brief but satisfactory answer.

BEFORE the silver begins to run from the place where it was melted, the subterraneous fire had pervaded the pores of the earth, which by the dilatation of the body of air inclosed in them, became distended; the metal immediately follows, and finding a channel
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sufficiently capacious for introducing itself, farther compresses the particles of the earth contiguous to those it abrades, and, consequently, continues its course without obstruction. The subterraneous fire which preceded the fusion, communicates to the earth a degree of heat sufficient to expel the cold air, so that the metal runs through it, till by degrees, the heat is abated, and the metal becomes fixed. Another circumstance which contributes to prolong the heat, is, there being often no spiracle to these passages, whence the earth through which the metal flows, does not soon emit the first heat it contracted from the subterraneous fire; consequently the metal will not be fixed till at a considerable distance from the place of liquidation; but the first particles of the metal being checked by the cold they have gradually contracted, those which follow flow to the same place, and there forms a concretioned mass, or mixed body of silver and scoria, brought with it from the original mine. It now remains that we examine whether what is actually observed in these lumps of silver, agrees with what has been advanced, in order to determine whether this opinion has a probable foundation.

THESE papas, or lumps of silver, are of a different composition from those found in the mine, having all the appearances of melted silver, as any person, a stranger to the manner of finding them, would immediately conclude. In them the silver forms a mass, and the surface is covered over with terrene particles, few or none of which are mixed with the silver; conformable to what is seen in metals melted, and suffered to cool without separating the dross. The terrene particles adhering to the silver are black, and exhibit all the marks of calcination, except that in some it is stronger than in others; and as this must happen if the lumps are formed by the fusion of the metal, it seems natural to conclude that they were really formed in this manner.

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THE size and figure of these lumps are very different; some weighing about two marks, and others much more; for among several which I saw at Lima were two, one weighing 60, and the other above 150 marks, being a Paris foot in length; these indeed were the largest ever seen here. These lumps of silver are found in different parts of the same ground, tho' not often near one another. The metal in its course takes various directions, introducing itself into those places where it finds the least resistance; and as these parts are more or less capacious, the magnitude of the *papa* is greater or smaller.

XIII. ABOUT ninety leagues N. of the city of Plata, but only forty from Paz, lies the province of Ciacica. Its capital, which has the same name, and all the places situated to the southward of it, belong to the archbishopric of Plata; but many of those to the northward of it are in the diocese of Paz. The countries in this jurisdiction extend in some parts above a hundred leagues, and consequently the temperature is various. Some spots are very hot, and produce an exuberance of *coca*, which shrub alone is the source of a very considerable commerce, supplying all the mine towns from Charcas to Potosi. The leaves of this plant are packed in frails, each of which must, according to the ordinance, contain eight pounds; and its current price at Oruro, Potosi, and the other mine towns, is from nine to ten pieces of eight, and sometimes more. The colder parts feed large herds of cattle; together with Vicunas, Guanacos, and other wild creatures. This province has also some silver mines, but not so many, nor so rich, as the preceding province.

XIV. ATTACAMA is the western boundary of the audience of Charcas, extending to the south sea; and the principal town, called also Attacama, is no less than 120 leagues from Plata. Its jurisdiction is of a considerable extent, and a great part of it very fruitful; but

but intermixed with some desarts particularly towards the S. where it divides the kingdoms of Peru and Chili. On the coast in this province there is every year a large fishery of Tolo, a sort of fish common in the S. sea, with which a very great trade is carried on with the inland provinces, it being there the chief food during Lent, and the other days of abstinence.

CH A P. XIV.

Account of the three Diocesses of LA PAZ, SANTA CRUZ DE LA SIERRA, and TUCUMAN; and of their respective Provinces.

THE province in which the present city of la Paz, is situated, was formerly known by the name of Chuquiyapu, which in the idiom of that country is commonly thought to signify Chacra, or an inheritance of gold, and is there corruptly called Chuquiabo. Accordingly Garcelaso pretends that Chuquiapu signifies Lanza Capitana, or principal lance; but this is deriving it from the general language of the Yncas, and with a difference in the penultima, it not being uncommon for a word nearly alike in sound to have a very different signification in each idiom. This province was first conquered by Mayta-Capac, the fourth Ynca; and the Spaniards having afterwards taken possession of it, and quelled all disturbances, this city was founded by Pedro de la Gasca, that in the vast distance of an hundred and seventy leagues between Arequipa and Plata, there might be a settlement of Spaniards, for the improvement of commerce, and the safety and conveniency of the traders. The president Gasca, committed the care of building it to Alonso de Mendoza, with orders that it should be erected on a spot, midway between Cusco and Charcas,

Charcas, which are one hundred and sixty leagues from each other ; and that it should be called Nuestra Senora de la Paz, in memory of the publick tranquillity recently settled by the defeat and execution of Gonzalo Pizarro, and his adherents. With regard to its situation, a valley in the country called las Pacafas, was pitched upon, on the 8th of October 1548, as a place abounding in grain, and cattle, and full of Indians.

ALONG the valley de la Paz, flows a large river, but sometimes greatly increased by torrents for the cordillera, about twelve leagues distant from the city ; but from its vicinity, great part of the country is exposed to so cold an air, as hard frosts, snow, and hail are not uncommon ; but the city itself is secured from them by its happy situation. Other parts are also so well sheltered, that they produce all the vegetables of a hot climate, as sugar canes, coca, maize, and the like. In the mountainous part are large woods of valuable timber, but infested with bears, tigers, and leopards ; they have also a few deer : While on the heaths are found Guanacos, Vicunas, and Llamas, with great numbers of cattle of the European species, as will be seen in the account of each respective province.

THE city is of a middling size, is surrounded with mountains, and commands the prospect of the river. When the river is increased either by rains, or the melting of the snow on the mountains, its current forces along huge masses of rocks, with some grains of gold, which are found after the flood has subsided. Hence some idea may be form'd of the riches inclosed in the bowels of these mountains ; but a more remarkable demonstration appeared in the year 1730, when an Indian happening to wash his feet in the river, discovered a lump of gold, of so large a size that the marquis de Castel-Fuerte, gave twelve thousand pieces of eight for it, and sent it to Spain, as a present worthy the curiosity of his sovereign.

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THIS city is governed by a corregidor, under whom are regidores, and ordinary alcaldes, as in all other towns. Besides the cathedral, and the parish church del Sagrario, where two priests officiate, here are also those of St. Barbara, St. Sebastian, and St. Peter: The religious fraternities of Franciscans, Dominicans, Augustines, the fathers of mercy, a college of Jesuits, and a convent and hospital of St. Juan de Dios; together with a nunnery of the order of the Conception, and another of Santa Teresa. Also a college of St. Jerom, for the education of youth, designed for ecclesiastic or civil employment.

IN 1608 the church de la Paz was separated from the diocess of Chuquisaca, to which it before belonged, and erected into a cathedral. Its chapter consists of the bishop, dean, archdeacon, chantor, four canons and prebendaries; but with regard to other circumstances, being the same with several cities already described, I shall proceed to the provinces in its diocess.

I. Bishopric of the audience of charcas.

La Paz.

THE provinces or jurisdictions in the diocess of Paz, are the six following.

I. La Paz.

IV. Laricaxas.

II. Omasuyos.

V. Chucuito.

III. Pacages.

VI. Paucar-Colla.

I. THE jurisdiction of la Paz, is of no great extent, and the city almost the only place worth notice in it. In the adjacent cordillera is a mountain of remarkable height called Illimani, which doubtless contains immense riches. A crag of it being some years since struck from it by a flash of lightning, and falling on a neighbouring mountain, such a quantity of gold was found in the fragments; that for some time that metal was sold at Paz, at eight pieces of eight per ounce. But its summit being perpetually covered with ice and snow, no mine has been opened in this mountain. The same we have already observed of those high

mountains in the province of Quito, Vol. I. all attempts having been rendered abortive.

II. N. W. and almost at the gates of Paz, the jurisdiction of Omasuyos begins and extends about 20 leagues, being bounded on the W. by the famous lake of Titi-caca, or Chucuito, of which a farther account will be given in the sequel. The air here is somewhat cold, so that it produces little grain; but that deficiency is abundantly compensated by the great numbers of cattle; besides an advantageous trade for fish, carried on in other provinces by the Indians living on the borders of the lake, who are very industrious in improving that advantage.

III. ALMOST S. W. of Paz, is the jurisdiction of Pacajes, the greatest part of which being in a cold climate produces little grain or fruits; so that the inhabitants apply themselves to the breeding of cattle. This province is however very rich in silver mines, tho' but a small part of them are worked; and it is known from undoubted signs that these mines were worked in the time of the Yncas. Here are also mines of talc, called jaspas blancos de Verenguela. It is of a beautiful white, and on account of its transparency is transported to different parts of Peru, for making panes of windows, both in churches and houses; as the stone called Tecali serves for the same uses in New Spain. In these mountains are also a great number of mines of gems, particularly one of emeralds, well known in Europe, but for some latent reasons not worked; together with quarries of different species of marble. In this province is the famous silver mine Verenguela; and the mountains of Santa Juana, Tampaya, and others, well known for the immense treasures extracted from them.

IV. ADJACENT to the territories of the jurisdiction of la Paz, and to the N. of that city is the province of Laricaxas, which extends 118 leagues from E. to W. and about thirty from N. to S. The temperature
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of the air is different in different parts, and some of its product are the same with those of Carabaya, by which it is terminated to the northward. This whole province abounds in gold mines, whose metal is of so fine a quality, that its standard is twenty-three carats, and three grains. In this province is the celebrated mountain of Sunchuli, in which, about fifty years since was discovered, a gold mine remarkably rich, and of the standard above-mention'd; but when in its highest prosperity, it was unfortunately overflowed; and notwithstanding prodigious sums were expended in endeavours to drain it, all the labour and expence, from the works being injudiciously conducted, were thrown away.

V. THE jurisdiction of Chucuito begins about twenty leagues W. of Paz, and some part of it bordering on the lake of Titi-caca, that collection of waters is also called the lake of Cucuito. The extent of this province from N. to S. is betwixt twenty-six and twenty eight leagues. Its temperature is in general, cold and very disagreeable, the frosts continuing one half of the year, and the other either snow or hail is continually falling. Accordingly the only esculent productions of the vegetable kingdom are the Papas and Quinoas. The inhabitants have however a very beneficial trade with their cattle, which abound in this jurisdiction, by salting and drying the flesh. The traders who carry it to the coast exchange it for brandy and wine; and those who go to Cochabamba, carry also Papas, and Quinoas, which they barter for meal.

ALL the mountains in this province have their silver mines, and formerly produced largely, but at present are totally abandoned.

THE territories of the province of Chucuito, are on one side bounded by the lake of Titi-caca, the magnitude of which merits some account to be given of it. This lake lies between these provinces, comprehended under the general name of Calloa, and is
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of all the known lakes of America, much the largest. Its figure is somewhat oval, inclining nearly from N. W. to S. E. its circumference is about 80 leagues, and the water in some parts 70 or 80 fathoms deep. Ten or twelve large rivers, besides a great number of smaller streams empty themselves into it. The water of this lake, tho' neither bitter or brackish, is turbid, and has in its taste something so nauseous that it cannot be drank. It abounds with fish, of two opposite kinds; one large and palatable, which the Indians call Suchis; the other small, insipid and bony, termed long since by the Spaniards Boyas. It has also great number of geese and other wild fowl, and the shores covered with flags and rushes, the materials of which the bridges are made, and of which an account will be given in the sequel.

As the western borders of this lake are called Chucuito, so those on the E. side are distinguished by the name of Omascuyo. It contains several islands, among which is one very large, and was anciently one mountain, but since levelled by order of the Yncas; it, however, gave to the lake its own name of Titicaca, which, in the Indian language, signifies a mountain of lead. In this island the first Ynca Mancho-Capac, the illustrious founder of the empire of Peru, invented his political fable, that the sun, his father, had placed him, together with his sister and consort Mama Oello Huaco, there, enjoining them to draw the neighbouring people from the ignorance, rudeness, and barbarity in which they lived, and humanize them by customs, laws, and religious rights dictated by himself; and in return for the benefits resulting from this artful stratagem, the island has, by all the Indians, been considered as sacred; and the Yncas determining to erect on it a temple to the sun, caused it to be levelled, that the situation might be more delightful and commodious.

THIS was one of the most splendid temples in the
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whole empire. Besides the plates of gold and silver with which its walls was magnificently adorned, it contained an immense collection of riches, all the inhabitants of provinces which depended on the empire, being under an indispensable obligation of visiting it once a year, and offering some gift. Accordingly they always brought in proportion to their zeal or ability, gold, silver, or jewels. This immense mass of riches, the Indians, on seeing the rapacious violence of the Spaniards, are thought to have thrown into the lake; as it is certainly known, they did with regard to a great part of those at Cusco, among which was the famous golden chain made by order of the Ynca Huayna Capac, to celebrate the festival of giving name to his eldest son. But these valuable effects were thrown into another lake, six leagues S. of Cusco, in the valley of Orcos: and tho' numbers of Spaniards animated with the flattering hopes of such immense treasures made frequent attempts to recover them, the great depth of the water, and the bottom being covered with slime and mud, rendered all their endeavours abortive. For notwithstanding the circuit is not above half a league, yet the depth of water is in most places not less than twenty-three or twenty-four fathoms.

TOWARDS the S. part of the lake Titi-caca, the banks approach each other, so as to form a kind of bay, which terminates in a river called el Desaguadero, or the drain, and afterwards forms the lake of Paria, which has no visible outlet; but the many whirlpools sufficiently indicate that the water issues by a subterraneous passage. Over the river Desaguadero is still remaining the bridge of rushes, invented by Capac Yupanqui, the fifth Ynca, for transporting his army to the other side, in order to conquer the provinces of Collasuyo. The Desaguadero is here between eighty and a hundred yards in breadth, flowing with a very impetuous current under a smooth, and, as it were, a sleeping surface. The Ynca to
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overcome this difficulty, ordered four very large cables to be made of a kind of grass which covers the lofty heaths and mountains of that country, and called by the Indians Ichu; and these cables were the foundation of the whole structure. Two of these being laid across the water; fascines of dry juncia and totora, species of rushes, were fastened together, and laid across them. On these the two other cables were laid, and again covered with other fascines securely fastened, but smaller than the first, and arranged in such a manner as to form a level surface; and by this means he procured a safe passage to his army. This bridge, which is about five yards in breadth, and one and a half above the surface of the water, is carefully repaired, or rebuilt every six months, by the neighbouring provinces, in pursuance of a law made by that Ynca, and since often confirmed by the kings of Spain, on account of its prodigious use; it being the channel of intercourse between those provinces separated by the Desaguadero.

VI. THE last jurisdiction of this bishopric is that of Paucar-Colla, whose capital is the town of Puno. Its jurisdiction southward borders on that of Chuquito, and has the same temperature: consequently is obliged to have recourse to other provinces for the greatest part of its grain, and esculent vegetables; but abounds in all kinds of cattle, both of the European and American kinds. The Indians of the town weave bags with their wool, and sell them to great advantage. The mountains in this province contain several silver mines, and among the rest the famous Laycacota, which formerly belonged to Joseph Salcedo, and where the metal was often cut out of the mine with a chissel; but its prodigious richness accelerated the death of its owner, soon after which the waters broke in to it; nor has any labour and expence been able to drain it, so that it is at present abandoned. Few of the rest are worked, the general case with almost all the silver

mines in this audience, especially of those in the archbishopric of Charcas, and this diocese of La Paz.

II. Bishopric in the audience of Charcas.

Santa Cruz de la Sierra.

The province of Santa Cruz de la Sierra, is a government and captain generalship: and tho' its jurisdiction is of a large extent, not many Spaniards are found in it, and the few towns are in general missions, comprehended under the common name of Paraguay missions. The capital of the same name was erected into a bishopric in the year 1605. Its chapter consists only of a bishop, dean, and archdeacon, having neither canons, prebendaries, or other dignitaries. The usual residence of the bishop is the city of Misque Poco-na, eighty leagues from Santa Cruz de la Sierra.

THE jurisdiction of Masque-Pocona, reaches above thirty leagues; and tho' the city itself is very thinly inhabited, there are, in other parts of it, several populous towns. The temperature is hot, but not in a degree too great for vineyards. The valley in which the city stands is above eight-leagues in circumference, and produces all kinds of grain and fruits; and the woods and uncultivated mountains afford great quantities of honey and wax, which constitute a principal branch of its commerce.

THE missions belonging to the Jesuits in the parts dependent on this bishopric, are those called Indios Chiquitos, or little Indians, a name given them by the Spaniards, on account of the extreme smallness of the doors of their houses. Their country lies between Santa Cruz de la Sierra, and the lake Xarayes, from whence the river Paraguay has its rise, and being increased by the conflux of others, forms the famous river de la Plata. It was about the close of the last century, when the fathers first began their preaching in this nation, and so great has been their success, that in the year 1732, they had form'd seven towns, each consisting of above 600 families; and were then build-

building others for assembling under the same laws, the great number of Indians, daily converted. These Indios Chiquitos are well made and active; and their courage has been often experienced by the Portuguese, who used to make incursions, in order to carry off the inhabitants for slaves: But the valour of these people has taught them to desist from such inhuman attempts, and, for their own safety, to keep within their limits. The arms of these Indians are muskets, sabres, and poisoned arrows. Though their language is different from that of the other nations of Paraguay, the same customs nearly obtain here, as among all the other Indians.

BORDERING on this nation of Chiquitos is another of Pagan Indians called Chiriguanos, or Chiriguanaes, who have always refused to listen to the missionaries; though the fathers still continue to visit them at certain times, and preach to them, but prudently take care to be accompanied with some Chiquitos for their security; and thus they make now and then a few converts, who are sent to their towns, and there lead a social life. This generally happens after some misfortune in the wars continually carried on between them and the Chiquitos; when in order the more easily to obtain a peace, and that the Chiquitos may not absolutely exterminate them, they send for missionaries; but soon dismiss them again, pretending that they cannot bear to see punishments inflicted on persons merely for deviating from the rules of reason. This plainly demonstrates, that all they desire or aim at, is an unbounded licentiousness of manners.

SANTA Cruz de la Sierra, the capital of this government, lies eighty or ninety leagues E. of Plata. It was originally built something farther toward the S. E. near the Cordillera of the Chiriguanos. It was founded in the year 1548, by captain Nuflo de Chaves, who called it Santa Cruz, from a town of that name near

Truxillo in Spain, where he was born. But the city having been destroyed, it was rebuilt in the place where it now stands. It is neither large nor well built, nor has it any thing answerable to the promising title of city.

III. Bilhopric of the Audience of CHARCAS.

El Tucuman.

TUCMA, by the Spaniards called Tucuman, lies in the center of this part of America, beginning S. of the Plata, beyond the towns of Chicas, which furnish Indians for the mines in Potosi. On the E. it borders on Paraguay and Buenos Ayres; reaches westward to the kingdom of Chili, and southward to the Pampas or plains belonging to the land of Magellan. This country, though united to the empire of the Yncas, was never conquered by them; having, when Vira Cocha the eighth Ynca had made himself sovereign in Charcas, sent a deputation of their chiefs, with a request of being admitted among the number of his subjects, and that he would be pleased to send them governors, that their country might partake of the benefits of those wise laws, and useful improvements he had introduced into all the parts of his empire.

THE Spaniards having penetrated into Peru, and finished the conquest of far the greatest part of that empire, proceeded to that of Tucuman in 1549, under the conduct of Juan Nunez de Prado, whom the president Pedro de la Gasca intrusted with the conduct of this expedition. He had, indeed, no opportunity of displaying his military talents; for the inhabitants being of a mild and easy disposition, readily submitted; on which the following four cities were built in that country; namely Santiago del Estero, so called from a river of the same name on which it is built, and whose inundations greatly contribute to increase the fertility of the soil; it stands above a hundred and sixty leagues S. of Plata: San Miguel del Tucuman, twenty-

twenty five or thirty leagues W. of the former : Nuestra Sennora de Talavera, something more than forty leagues N. W. of Santiago The fourth was called Cordova de la Nueva Andalucia, and is above eighty leagues S. of Santiago.

THE territories of this government being of such extent that they reach from N. to S. above two hundred leagues, and little short of a hundred in some parts from E. to W. it was judged proper to increase the number of Spanish settlements ; and accordingly orders were given for building two other cities, which are Rioja, about eighty leagues S. W. of Santiago, and Santa, between sixty and seventy leagues N. W. of the same city ; together with a village called San Salvador, or Xuxui, about twenty leagues N. of Salta. But all these places are small, and built without either order or symmetry. The governor, notwithstanding Santiago was the first, resides at Salta ; and even the bishop with his chapter at Cordova, which is the largest. The others have their respective Corregidors, under whom also are the Indian villages within the dependencies of their proper cities. But of these there is no great number, the principal part of the country not being inhabitable, either from a want of water, or from their being covered with impenetrable forests. This want of inhabitants is also greatly owing to the cruelties and ravages of the savage Indians, in their frequent incursions.

THE episcopal church of Tucuman, which, as we have already observed, is in Cordova, was in the year 1570 erected into a cathedral, and its chapter now consists of the bishop, dean, archdeacon, chantor, rector and treasurer, who is elected ; but has neither canons nor prebendaries.

THOSE parts of the country which are watered by the rivers, are so remarkably fertile in grain and fruits, that they produce sufficient for the common consumption of the inhabitants. The woods abound

in wild honey and wax, whilst the hot parts produce sugar and cotton; the last is manufactured here, and with the woollen stuffs also wove by the inhabitants, form an advantageous branch of trade. But its great article consists in the mules bred in the luxuriant pastures of its valleys. Inconceivable droves of these creatures are sent to all parts of Peru, the Tucuman mules being famous over these countries, far exceeding all others in strength, and docility.

CHAP. XV.

Account of PARAGUAY and BUENOS AYRES; the two last Governments of the Audience of CHARCAS.

IV. Bishopric of the Audience of CHARCAS.

PARAGUAY.

THE government of Paraguay lies S. of Santa Cruz de la Sierra, and E. of Tucuman. Southward it joins to that of Buenos Ayres; and is terminated eastward by the captainship of St. Vicente in Brazil, whose capital is the city of St. Pablo. These countries were first discovered by Sebastian Gaboto, who, coming to the river of Plata in the year 1526, sail'd up the river Parana in some small barks, and thence entered that of Paraguay. He was succeeded in 1536 by Juan de Ayolas, to whom Don Pedro de Mendoza, the first governor of Buenos Ayres, had given a commission, together with a body of troops, military stores and other necessaries; and afterwards, by his orders, Juan de Salinas, founded the city of Nuestra Senora de la Assumption, the capital of the province; but the discovery of the whole, and consequently the conquest of people who inhabited it,

it, being still imperfect, it was prosecuted by Alvar Nunez, surnamed Cabeza de Baca, or Cowhead, whose eminent services, on the death of Don Pedro de Mendoza, procur'd him the government of Buenos Ayres.

THE only settlements in the whole extent of this government, are the city of Assumption, Villa Rica, and some other towns, whose inhabitants are a mixture of Spaniards, Mestizos, and some Indians, but the greatest part of the several casts. As the city itself is but small and irregular, nothing better can be expected in Villa Rica, and other towns and villages. Its houses are indeed intermixed with gardens and plantations, but without any symmetry. It is the residence of the governor of the province, who had formerly under his jurisdiction, part of the towns composing the missions of Paraguay; but a few years since they were separated from it, and are now annexed to the government of Buenos Ayres; but without any change in the ecclesiastical government. In the city of Assumption is a cathedral, whose chapter consists of the bishop, dean, archdeacon, treasurer, and two canons. The parishes of the city of Villa Rica, and of the other towns depending on this government are served by the Franciscans: but in the missionary towns they are solely under the care of the Jesuits; and these composing the greater number of towns in this province, I shall speak particularly of them, still keeping to that conciseness I have observed in the other jurisdictions.

THE missions of Paraguay, besides those in the province of that name, include also a great many of Santa Cruz de la Sierra, Tucuman and Buenos Ayres. Within a century and a half, the epocha of their first establishment, they have been the means of bringing into the bosom of the church, many Indian nations, who lived in the blindness of idolatry, and the turpitude of the savage customs

transmitted to them by their ancestors. The first instance of this apostolic zeal was the spiritual conquest of the Guacanies Indians, some of whom inhabited the banks of the rivers Uruguay and Parana; and others near an hundred leagues up the countries N. W. of the Guayra. The Portuguese, then only intent on the improvements of their colonies, in violation of the most sacred laws, did not even after the conversion of these people, cease from making incursions, in order to carry off the young inhabitants as slaves for their plantations; so that it became absolutely necessary, in order to preserve these converts, to remove into Paraguay, about 12000 of all ages, and both sexes; a like number of emigrants was also brought from Tappe, and formed into communities, living here in peace and safety; and at the same time in a decency becoming their new profession.

BUT the number of succeeding converts was so great, that continual additions were necessary to these towns, so that I was at Quito informed by a person of undoubted veracity, and thoroughly acquainted with such matters, that the number of towns of the Guaranies Indians in the year 1734, amounted to thirty two, and supposed to contain between thirty and forty thousand families: That from the increasing prosperity of the Christian religion, they were then deliberating on the manner of building three other towns, these thirty-two being in the diocesses of Buenos Ayres, and Paraguay. Besides the Indios Chiquitos belonging to the diocess of Santa Cruz de la Sierra, there were at that time seven very populous towns; and by reason of the great resort of converted Indians, preparations were making for building others.

THE Paraguay missions are on all sides terminated by nations of idolatrous Indians; some of which however live in perfect harmony with them, but others do
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all in their power to exterminate them by frequent incursions; and it is with the latter that the fathers chiefly employ their zeal, in order to reclaim them from their inhumanity, by preaching to them the glad tidings of the gospel. Nor is this fortitude destitute of fruit, the most rational receiving with joy the knowledge of the true God, and quitting their country, are conducted to the Christian towns, where, after proper instructions, they are admitted to baptism.

ABOUT a hundred leagues from the missions is a nation of idolaters called Guanoas. It is with great difficulty any of these are brought to embrace the light of the gospel, as they are extremely addicted to a licentious life; and a great number of Mestizos, and even some Spaniards, whose crimes have obliged to take shelter among them, by their ill example harden the Indians in their contempt of instruction. Besides they are so indolent and slothful, that they will not take the pains to cultivate the lands, chusing to live by the more expeditious way of hunting; and being convinced, that if they embrace the Christian religion, and submit to the missionaries, they must labour, they cannot bear to think of a change which will inevitably deprive them of their favourite indolence. Many, however, of those who come to the Christian towns to visit their relations, cannot withstand the order and decency in which they see them live, and accordingly embrace the Christian religion.

It is nearly the same with the Charuas, a people inhabiting the country between the rivers Parana and Uruguay. Those dwelling on the banks of the river Parana, from the town of Corpus upwards, and called Guananas, are more tractable, and their industry in agriculture and other rural arts, render them more susceptible of listening to the preaching of the missionaries: besides no such thing as a fugitive is to be found among them. Near Cordova is another nation of idolaters, called Pampas, who, notwithstanding they fre-

frequently come to the city, to sell different productions of the earth, are very obstinate in their opinions, and, consequently, are not reclaimed without the greatest difficulty. These four nations of idolatrous Indians live, however, in peace with the Christians.

In the neighbourhood of the city of Santa Fé, situated in the province of Buenos Ayres, are others who absolutely reject all terms of peace; so that even the villages and estates near Santiago and Salta in the government of Tucuman have felt the effects of their daring incursions. The other nations between these and the Chiquitos, and the lake of Xarayes, are little known. Not many years since some Jesuit missionaries ventured to visit their country up the river Pilcomayo, which runs from Potosi to Assumption; but their territories being very large, and living a vagrant sort of lives, without fixed habitations, the zeal of the good fathers was frustrated; as it has indeed on many other occasions, even after repeated trials.

THE idolatrous Indians, who inhabit the country from the city of Assumption northward, are but very few. The missionaries have been so fortunate to meet with some of these in their journeys after them, and prevailed on them to accompany them to the Christian towns, where, without much reluctance, they have embraced Christianity. The Chiriguanos, already mentioned, also reside in these parts; but are so infatuated with the pleasures of a savage life, that they will not hear of living under laws.

FROM what has been said, it will easily be conceived that the country occupied by the Paraguay missions, must be of a very great extent. The air in general is moist and temperate; tho' in some parts, it is rather cold. The temperate parts abound with all kinds of provisions. Cotton contributes considerably to their riches, growing here in such quantities, that every little village gathers of it annually above two thousand arobas; and the industrious are very ingenious.

nious in weaving it into stuffs for exportation. A great deal of tobacco is also planted here. But these articles are far less advantageous to the inhabitants than the herb called Paraguay, which alone would be sufficient to form a flourishing commerce in this province, it being the only one which produces it; and from hence it is sent all over Peru, and Chili, where its use is universal; especially that kind of it called Camini, which is the pure leaf; the other, distinguished by the name of Palos, being less fine, and not so proper for making mate, is not so valuable.

THESE goods are carried, for sale, to the cities of Santa Fe, and Buenos Ayres, where the fathers have factors; the Indians, particularly the Guaranies, wanting the sagacity and address, so absolutely necessary to procure success in commercial affairs. These factors dispose of what is consigned to them from Paraguay, and lay out the money in such European goods as the towns are then in want of, in ornaments for the churches, and the decent support of the priests officiating in them. But the greatest care is taken in deducting from what each town sends, the amount of the tribute of its Indian inhabitants, which is remitted immediately to the revenue office, without the least deduction, except the stipends for the priests, and the pensions allowed the Caciques.

THE other products of their lands, together with their cattle, are made use of for the subsistence of the inhabitants, among whom they are distributed with such regularity and œconomy, that the excellent police under which those people live so happily cannot be passed over in silence, without great injustice to these wise legislators.

EVERY town of the missions of Paraguay, like the cities, and great towns of the Spaniards, are under a governor, regidores and alcaldes. That the important office of governor may be always filled by a person duly qualified, he is chosen by the Indians, with the approbation

tion of the priests. The *alcaldes* are annually appointed by the *regidores*, and jointly with them, the governor attends to the maintainance of good order and tranquility among the inhabitants; and that these officers, who are seldom persons of the most shining parts, may not abuse their authority, and either thro' interest, or passion, carry their revenge too far against other Indians, they are not to proceed to punishment without previously acquainting the priest with the affair, that he may compare the offence with the sentence. The priest, on finding the person really guilty, delivers him up to be punished, which generally consists in imprisonment for a certain number of days, and sometimes fasting is added to it; but if the fault be very great, the delinquent is whipt, which is the most severe punishment used among them; these people being never known to commit any crime that merits a greater degree of chastisement; for immediately on being registered as converts, the greatest care has been taken in these missions, to imprint on the minds of these new Christians, a detestation of murder, robbery, and such atrocious crimes. The execution of the sentence is preceded by a discourse made by the priest before the delinquent, in which he represents to the offender, with the greatest softness and sympathy, the nature of his crime, and its turpitude; so that he is brought to acknowledge the justness of the sentence, and to receive it rather as a brotherly correction, than a punishment; so that tho' nature must feel, yet he receives the correction with the greatest humility and resignation, being conscious that he has brought it upon himself. Thus the priests are in no danger of any malice being harboured against them; indeed the love and veneration the Indians pay them is so great, that could they be guilty of enjoying an unjust punishment, the suffering party would impute it to his own demerits, being firmly per-

persuaded that the priests never do any thing without a sufficient reason.

EVERY town has a particular armory, in which are kept all the fire-arms, swords, and weapons used by the militia, when they take the field, whether to repel the insults of the Portuguese, or any heathen Indians inhabiting on their frontiers. And that they may be dextrous in the management of them, they are exercised on the evening of every holiday in the market-places of the towns. All persons capable of bearing arms in every town, are divided into companies, and have their proper officers, who owe this distinction to their military qualifications: their uniform is richly laced with gold or silver, according to their rank, and embroidered with the device of their towns. In these they always appear on holidays, and at the times of exercise. The governor, alcaldes, and regidores, have also very magnificent habits of ceremony, which they wear on solemn occasions.

No town is without a school for teaching reading, writing, dancing, and music: and in whatever they undertake they generally excel, the inclination and genius of every one being carefully consulted before they are forwarded in any branch of science. Thus many attain a very good knowledge of the Latin tongue. In one of the courts of the house belonging to the priest of every town, are shops or workhouses for painters, sculptors, gilders, silversmiths, locksmiths, carpenters, weavers, watchmakers, and all other mechanic arts and trades. Here every one works for the benefit of the whole town, under the inspection of the priests coadjutors; and boys are there also instructed in those trades or arts, to which they have the greatest inclination.

THE churches are large, and well built: and, with regard to decorations, not inferior to the richest in Peru. Even the houses of the Indians are built with that symmetry and convenience, and so compleatly and elegantly

elegantly furnished, as to excel those of the Spaniards in many towns in this part of America. Most of them however are only of mud walls, some of unburnt bricks, and others of stone; but all, in general, covered with tiles. Every thing in these towns is on such good footing, that all private houses make gun-powder, that a sufficient quantity of it may not be wanting, either on any exigency, or for fireworks on holidays, and other anniversary rejoicings which are punctually kept. But the most splendid ceremony is on the accession of the new monarch to the Spanish throne, when the governor, alcaides, regidores, together with all the civil and military officers, appear in new uniforms, and other ornaments, to express the ardent affection they bear their new sovereign.

EVERY church has its band of musick, consisting of a great number both of vocal and instrumental performers. Divine service is celebrated in them with all the pomp and solemnity of cathedrals. The like is observed in publick processions, especially that on Corpus Christi day, at which the governor, alcaides, and regidores, in their habits of ceremony, and the militia in their uniforms, assist: the rest of the people carry flambeaux; so that the whole is conducted with an order and reverence suitable to the occasion. These processions are accompanied with fine dancing, but very different from that in the province of Quito, described in the first volume; and the performers wear particular dresses, extreamly rich, and well adapted to the characters represented. In short, a missionary town omits no circumstance either of festivity or devotion, practised in opulent cities.

EVERY town has a kind of Beaterio, where women of ill fame are placed: it also serves for the retreat of married women who have no families, during the absence of their husbands. For the support of this house, and also of orphans and others, who by age or any other circumstance are disabled from earning

a livelihood, two days in the week are set apart; when the inhabitants of every village are obliged to sow and cultivate a certain piece of ground, called *Labor de la Comunidad*, the labour of the community; and the surplus of the produce is applied to procure furniture and decorations for the church, and to clothe the orphans, the aged, and the disabled persons. By this benevolent plan all distress is precluded, and the inhabitants provided with every necessary of life. The royal revenues are punctually paid; and by the union of the inhabitants, the uninterrupted peace they enjoy, and the wisdom of their polity, which is preserved inviolable, these places, if there are any such on earth, are the habitations of true religion and felicity.

THE jesuits, who are the priests of these missions, take upon them the sole care of disposing of the manufactures and products of the Guaranies Indians, designed for commerce; these people being naturally careless and indolent, and doubtless without the diligent inspection and pathetic exhortations of the fathers, would be buried in sloth and indigence. The case is very different in the missions of the Chiquitos, who are industrious, careful, and frugal; and their genius so happily adapted to commerce, as not to stand in need of any factors. The priests in the villages of this nation are of no expence to the crown, the Indians themselves rejoicing in maintaining them; and join in cultivating a plantation filled with all kinds of grain and fruits for the priest; the remainder, after this decent support, being applied to purchase ornaments for the churches.

THAT the Indians may never be in any want of necessaries, it is one part of the minister's care to have always in readiness a stock of different kinds of tools, stuffs, and other goods; so that all who are in want repair to him, bringing by way of exchange wax, of which there are here great quantities;

cities; and other products. And this barter is made with the strictest integrity, that the Indians may have no reason to complain of oppression; and that the high character of the priests for justice and sanctity may be studiously preserved. The goods received in exchange are by the priests sent to the superior of the missions, who is a different person from the superior of the Guaranies: and with the produce, a fresh stock of goods is laid in. The principal intention of this is, that the Indians may have no occasion to leave their own country, in order to be furnished with necessaries; and by this means are kept from the contagion of those vices, which they would naturally contract in their intercourse with the inhabitants of other countries, where the depravity of human nature is not corrected by such good examples and laws.

If the civil government of these towns be so admirably calculated for happiness, the ecclesiastical government is still more so. Every town and village has its particular priest, who in proportion to its largeness, has an assistant or two of the same order. These priests, together with six boys who wait on them, and also sing in the churches, form in every village a kind of small college, where the hours are under the same regulation, and the exercises succeed each other with the same formalities as in the great colleges of cities. The most laborious part of the duty belonging to the priest, is to visit personally the chacaras or plantations of the Indians; and in this they are remarkably sedulous, in order to prevent the ill consequences of that slothful disposition so natural to the Guaranies; who, were they not frequently roused and stimulated by the presence of the priest, would abandon their work, or, at least, perform it in a very superficial manner. He also attends at the public slaughter-house, where every day are killed some of the cattle; large herds of which
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are kept for the public use by the Indians. The flesh of these beasts are dealt out by the priest, in lots proportionable to the number of persons each family consists of; so that every one has a sufficiency to supply the calls of nature, but nothing for waste. He also visits the sick, to see that they want for nothing, and are attended with that care and tenderness their state requires. These charitable employments take up so great a part of the day, as often to leave him no time for assisting the father coadjutor in the services of the church. One useful part of the duty of the latter is to catechize, and explain some portion of scripture in the church every day in the week, thursdays and saturdays excepted, for the instruction of the young of both sexes; and these in every town are not less than two thousand. On sundays all the inhabitants never fail to attend divine service. The priest also visits the sick to confess them; and, if the case requires it, to give them the Viaticum; and to all these must be added the other indispensable duties of a priest.

By the strictness of the law these priests should be nominated by the governor, as vice-patron, and be qualified for their function by the consecration of the bishop; but as among the three persons recommended on such occasions to the governor, there will of consequence be one, whose virtues and talents render him most fit for the office; and as no better judges of this can be supposed than the provincials of the order, the governor and bishop have receded from their undoubted rights, and the provincials always collate and prefer those whose merits are most conspicuous.

THE missions of the Guaranies are all under one superior, who nominates the assistant priests of the other towns. His residence is at Candelaria, which lies in the center of all the missions; but he frequently visits the other towns in order to superintend their

governments; and, at the same time, concert measures that some of the fathers may be sent among the heathen Indians, to conciliate their affections, and by degrees work their conversion. In this important office he is assisted by two vice-superiors, one of whom resides at Parana, and the other on the river Uruguay. All these missions, tho' so numerous and dispersed, are formed as it were into one college, of which the superior may be considered as the master or head; and every town is like a family governed by a wise and affectionate parent, in the person of the priest.

IN the missions of the Guaranies the king pays the stipends of the priests, which, including that of the assistant, is three hundred dollars per annum. This sum is lodged in the hands of the superior, who every month supplies them with necessary food and apparel, and on any extraordinary demand, they apply to him, from whom they are sure of meeting with a gracious reception.

THE missions of the Chiquito Indians have a distinct superior; but with the same functions as he who presides over the Guaranies; and the priests also are on the same footing, but have less anxiety and labour; the industry and activity of these Indians, saving them the trouble of coming among them to exhort them to follow their employments, or of being the storekeepers and agents in disposing of the fruits of their labours; they themselves vending them for their own advantage.

ALL these Indians are very subject to several contagious distempers; as the small-pox, malignant fevers, and others, to which, on account of the dreadful havock attending them, they give the name of pestilence. And to such diseases it is owing, that these settlements have not increased in a manner proportional to their numbers, the time since their establishment, and the quietness and plenty in which these people live,

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THE missionary fathers will not allow any of the inhabitants of Peru, whether Spaniards or others, mestizos, or even Indians, to come within their missions in Paraguay. Not with a view of concealing their transactions from the world; or that they are afraid lest others should supplant them of part of the products and manufactures; nor for any of those causes, which even with less foundation, envy has dared to suggest; but for this reason, and a very prudent one it is, that their Indians, who being as it were new born from savageness and brutality, and initiated into morality and religion, may be kept steady in this state of innocence and simplicity. These Indians are strangers to sedition, pride, malice, envy, and other passions which are so fatal to society. But were strangers admitted to come among them, their bad examples would teach them what at present they are happily ignorant of; but should modesty, and the attention they pay to the instructions of their teachers, be once laid aside, the shining advantages of these settlements would soon come to nothing; and such a number of souls, who now worship the true God in the beauty of holiness, and live in tranquility and love (of which such slender traces are seen among civilized nations) would be again seduced into the paths of disorder and perdition.

THESE Indians live at present in an entire assurance, that whatever their priests advise them to is good, and whatever they reprehend is bad. But their minds would soon take a different turn, by seeing other people, on whom the doctrine of the gospel is so far from having any effect, that their actions are absolutely repugnant to its precepts. At present they are firmly persuaded, that in all bargains and other transactions, the greatest candor and probity must be used, without any prevarication or deceit. But it is too evident, that were others admitted among them, whose leading maxim is to sell as dear,

and buy as cheap as they are able, these innocent people would soon imbibe the same practice, together with a variety of others which seem naturally to flow from it. The contamination would soon spread thro' every part of their behaviour, so as never more to be reclaimed. I do not here mean to lessen the characters of those Spaniards or inhabitants of other nations, whose countries are situated conveniently for trading with Paraguay, by insinuating that they are universally fraudulent and dissolute: but, on the other hand, among such numbers, it would be very strange if there were not some; and one single person of such a character would be sufficient to infect a whole country. And who could pretend to say, that, if free admission were allowed to foreigners, there might not come in, among a multitude of virtuous, one of such pestilent dispositions? Who can say that he might not be even the very first? Hence it is that the jesuits have inflexibly adhered to their maxim of not admitting any foreigners among them: and in this they are certainly justified by the melancholy example of the other missions of Peru, whose decline from their former happiness and piety is the effect of an open intercourse.

THOUGH in the several parts of Paraguay, where the missions have been always settled, there are no mines of gold and silver; several are to be found in some adjacent countries under the dominion of the king of Spain; but the Portuguese reap the whole benefit of them: for having encroached as far as the lake Xarayes, near which, about twenty years ago, a rich mine of gold was discovered; they, without any other right than possession, turned it to their own use: the ministry in Spain, in consideration of the harmony subsisting between the two nations, and their joint interest, forbearing to make use of any forcible methods.

V. Bishop-

V. Bishopric of the audience of Charcas.

Buenos Ayres.

THE ecclesiastical jurisdiction of the bishop of Buenos Ayres extends to all the countries under the temporal government of the same name; and this begins on the oriental and southern coast of that part of America, and extends westward as far as Tucuman; on the N. it terminates on Paraguay, and is bounded towards the S. by the land of Magellan. Its countries are watered by the great river de la Plata, the discovery of which was owing to Juan Dias de Solis, who, in 1515 having sailed from Spain with two vessels to make discoveries, arrived at the mouth of this river, and took possession of it in the name of the king of Spain. But being unhappily deluded by the signs of joy and friendship made by the Indians, he landed, and was immediately killed, together with his few attendants. The same voyage was repeated in 1526 under Sebastian Gabot, who entering the river, discovered an island, which he called St. Gabriel; and advancing further, came to another river, which emptied itself into that of La Plata; to this he gave the name of St. Salvador, causing his fleet to enter the river, and there disembark their troops. Here he built a fort, and leaving in it part of his men, he sailed above two hundred leagues up the river Parana, discovering also that of Paraguay. Gaboto, having purchased some ingots of silver from the Indians he met with, and particularly from the Guaranies, who brought the metal from the other parts of Peru, imagined that they had found it in the neighbourhood of the river, and thence called the river Rio de la Plata, or Silver River, which has superseded that of Solis, as it was before called from its first discoverer, whose memory is still preserved by the little river Solis, about seven or eight leagues W. of Maldonado bay.

The capital of this government is called Nuestra

Senora de Buenos-Ayres. It was founded in the year 1535 by Don Pedro de Mendoza, pursuant to his orders, which also appointed him governor. He chose for it a Place called Cape Blanco, on the S. side of Rio de la Plata, close by a small river. Its latitude, according to father Feville, is 34° , $34'$, $38''$, S. He gave it the name of Buenos Ayres, on account of the extreme salubrity of the air. The city is built on a large plain, gently rising from the little river. It is far from being small, having at least three thousand houses, inhabited by Spaniards and different casts. Like most towns situated on rivers, its breadth is not proportional to its length. The streets are however strait, and of a proper breadth. The principal square is very large, and built near the little river; the front answering to it, being a castle where the governor constantly resides; and, with the other forts, has a garrison of a thousand regular troops. The houses, formerly of mud walls, thatched with straw and very low, are now much improved, some being of chalk, and others of brick, and having one story besides the ground floor, and most of them tiled. The cathedral is a spacious and very elegant structure, and is the parish church for the greatest part of the inhabitants; the other at the farther end of the city being only for the Indians. The chapter is composed of the bishop, dean, arch-deacon, and two canons, one by composition, the other by presentation. Here are also several convents, and a royal chapel in the castle where the governor resides. With regard to the civil and æconomical government, and the magistracy, it will be unnecessary to enter into particulars, they being on the same footing as those of the places already mentioned.

THE climate here is very little different from that of Spain; and the distinctions between the seasons are the same. In winter indeed violent tempests of winds

winds and rain, are here very frequent, accompanied with such dreadful thunders and lightnings, as fill the inhabitants, though used to them, with terror and consternation. In summer the excessive heats are mitigated by gentle breezes, which constantly begin at eight or nine in the morning.

THE city is surrounded by a spacious and pleasant country, free from any obstruction to the sight; and from these delightful fields, the inhabitants are furnished with such a plenty of cattle, that there is no place in America or Europe where meat is better or cheaper. It is the usual custom to buy the hides of the beast, the carcase being in some measure a gratuitous addition; and the meat is always fat and very palatable. The country to the W. S. and N. of Buenos Ayres, lately abounded so greatly in cattle and horses, that the whole cost consisted in taking them; and even then a horse was sold for a dollar of that money, and the usual price of a beast, chosen out of a herd of two or three hundred, only four rials. At present there is no scarcity, but they keep at a greater distance, and are more difficult to be caught, by reason of the prodigious havock made of them by Spaniards and Portuguese, merely for the sake of their hides; the grand commerce of Buenos Ayres.

ALL kinds of game and fish are also here in the same plenty; several sorts of the latter being caught in the river running by it; but the Pexereyes are very remarkable, some of them being half a yard or more in length. Both the American and European fruits come to full perfection, and are in great plenty. In a word, for the enjoyments of life, especially with regard to the salubrity of the air, a finer country cannot be imagined.

THIS city is situated about seventy-seven leagues from Cape Santa Maria, which lies on the N. coast near the entrance of the river de la Plata; and its little river not having water sufficient for ships of burden

burden to come up to Buenos Ayres, they anchor in one of the two bays on the same coast. That farthest to the eastward is called Maldonado, and is nine leagues from the above cape: the other bay, is, from a mountain near it, named Monte-video, and is about twenty leagues from it.

WITHIN the government of Buenos Ayres, are three other cities, namely, Santa Fè, las Corientes, and Monte-video. The last which was lately built, stands on the border of the bay, from whence it derives its name. Santa Fè, lies about ninety leagues N. W. of Buenos Ayres, between the Rio de la Plata, and the Rio Salado, which after running thro' the country of Tucuman, joins the former. The city is but small, and meanly built; owing in a great measure, to the insults it has frequently suffered from the heathen Indians, who not long since pillaged it, massacring the inhabitants of the city, and those of the neighbouring villages; and they still keep the country under continual apprehensions of another visit. It is however the channel of the commerce between Paraguay and Buenos Ayres, for the herb Camini and Palos. The city de las Corientes, situated on the eastern banks of the river de la Plata, betwixt it and the river Parana, is about a hundred leagues N. of the city of Santa Fè. Its magnitude and disposition are both inferior to Santa Fè, and indeed has no marks of a city except the name. Each of these cities has its particular corregidor, as lieutenant of the governor; and its inhabitants, together with those of the neighbouring country are formed into a militia, which on any appearance of an invasion from the Indians, assemble, and have often shewn a great deal of resolution in repelling the attacks of their Pagan enemies. It has already been observed, that part of the towns of the missions of Paraguay belong to this diocese, and with regard to the royal jurisdiction, these missions universally depend on Buenos Ayres; those

those which formerly belonged to the government of Paraguay having been separated from it.

HAVING thus with the government of Buenos Ayres, finished my account of every thing worthy of notice in the audiences of Lima and Charcas; together with the jurisdictions included in their diocesses, it now remains only to conclude my description of the kingdom of Peru, with an account of the kingdom and audience of Chili; but the many objects of importance in it so well deserves to be fully treated of, that I thought proper to reserve them for the following book; those included in this, as I have mentioned in its place, merited a much greater prolixity; for from what has been said in the first volume of the province of Quito, some idea of the difference between the two with regard to the number of people, towns and villages, trade and commerce, may be conceived; the province of Quito having only one diocess and part of another; whereas Lima contains one archbishopric, and four bishoprics; and that of Charcas one bishopric more than that of Lima. In the province of Quito only a few mines are worked, and those to little advantage; whereas the mines of Lima and Charcas, by their immense riches, draw thither great numbers of traders and industrious people, and thus spread wealth and affluence through the whole country, by the brisk circulation of trade. It must however be owned, that the number of people in these provinces bear no proportion to their extent; and it is with too much truth said, that they are in many places almost destitute of people; for supposing a corregidor to have twenty villages under his jurisdiction; yet if the least extent of it be thirty leagues one way, and fifteen another, they must be very thin. For draw a parallelogram of that dimensions, it will contain 450 square leagues of ground, and consequently the share to each village will be
twenty

twenty two square leagues and a half. This calculation is made from the smallest distances, there being jurisdictions of a far greater extent; and others, which, tho' equal in dimensions, have not twenty villages. What has been said of the products and manufactures in each jurisdiction must be understood in a general sense, not having entered into many particulars made or produced in some towns, and not common to others; as may be observed in the description of Quito. But these accounts drawn from our own experience, and the relations of persons of undoubted veracity, we hope will not prove unacceptable to the reader, who is desirous of forming a true idea of these parts, which for their riches, fertility, prodigious extent, and many other particulars, merit the greatest attention; especially for the amazing success which has attended the propagation of the christian religion, in countries formerly involved in ignorance and inhumanity.

BOOK II.

Return from LIMA to QUITO: Voyage from CALLAO to GUAYAQUIL, for putting that City in a Posture of Defence against the Attack apprehended from the ENGLISH Squadron, under Commadore ANSON. Second Voyage to LIMA, and from thence to the Island of JUAN FERNANDES, and the Coast of CHILI; with an Account of that Kingdom, and the adjacent Sea, and return to the Port of CALLAO.

CHAP. I.

Voyage from CALLAO to PAITA, with nautical Remarks.

THE time of our stay at Lima and Callao was taken up in the diligent execution of several commissions with which the Vice-roy had been pleased to honour us, for putting the coasts, and other parts of that kingdom in the best posture of defence; that in case an English squadron should make any attack*, so a vigorous resistance might discourage any farther attempt of that nature. Having made the necessary dispositions to the Vice-roy's satisfaction, and four men of war which had been sent at the beginning of the summer to cruize off the coast of Chili, in order to attack the English squadron at their first appearance, being returned without the least information of any foreign ships having been seen in those seas; and the season of

* At this time Spain and England were at war.

the year now inclining to winter, when every one was of opinion that it was utterly impracticable for Mr. Anson and his ships to get round Cape Horn that year, if (as indeed we concluded) he had not already perform'd it; we desired leave, as our longer stay could be of no service, to return to Quito, in order to prosecute the original design of our voyage. This leave, we, with some difficulty, obtained; by reason of the great want of officers in Peru, and the certain advice the Vice-roy received, that the Spanish squadron, under the command of Don Joseph Pizarro, had not been able to get round Cape Horn. But at length, convinced that our stay would greatly retard the execution of his majesty's particular commands, and confident that on any sudden exigency he would find the same alacrity in us to obey his orders, he was pleased to grant our request, and dismissed us in the most polite manner.

THERE happened at this time to be one of the largest merchant ships trading in the south seas, at Callao, just ready to sail for Guayaquil, called the Chaldas. On board this ship we embarked on the 8th of August 1741, and on the 15th of the same month anchored at Paita: continued our voyage from thence on the 18th, and on the 21st entered the harbour of Puna. We immediately set out for Guayaquil, and from thence continued our journey for Quito, which we reached on the 5th of September.

THE course generally steered from Callao to Paita, is first W. N. W. till the ships are past the Feralones* of the island of Guara. From thence N. W. and N. W. one quarter northerly, to a latitude a little beyond the outermost island of Lobos, or Wolves. Afterwards they steer N. and N. E. till they make the continent within them, and which is continued in sight

* The Feralones are two old walls on the island of Guara, and serve as light-houses.

till they arrive at the Port of Paita; being very careful to keep at a proper distance from Ogujia, which is very low, and projecting a great distance into the sea. Accordingly cautious navigators, after passing the islands of Lobos, steer a north course till they get sight of that of Nonura.

THE land of this whole coast is low; but there are two signs which evidently indicate its being near. First the sea-wolves, which are seen near these islands, and at three or four leagues distant from them. The second is the great flocks of birds all along this coast, flying two or three leagues from the shore, in quest of food. And tho' fogs are very frequent here, and so thick as to hide the land, yet its distance may be nearly known from these signs in the day time; but at night more circumspection is necessary on account of the extream lowness of the shore. And tho' the islands of Lobos are something higher than the coast, too much caution cannot be used in approaching them.

It is common in this voyage if the ship is intended to touch at Paita, and has not had sight of the islands of Lobos in the day-time, when in their latitude, to lie to all night. But if they do not propose to stop at Paita, proper attention must be given to the course, and the voyage continued. If the ship be bound to Paita, there is a necessity for making these islands, or the continent near them to the N. in order to avoid being carried beyond the port by the currents; as in such a case a great deal of time would be lost in getting back, both the wind and currents being contrary.

FROM Paita, the coast is always kept in sight; but a careful look out is necessary in order to discover the Negrilos, rocky shoals, projecting four or five leagues distant from the shore, and lying betwixt Paita and cape Blanco, one of the points of Guayaquil bay. The winds during this whole passage are usually S. but
in

in the summer, that is, from November to May, sometimes veer as far as S. E. Near the coast is a periodical morning breeze, or faint easterly wind, which shifts round to the S. E. or S. S. E. and in this season, at any distance from the coast, the S. winds are also faint; nor are calms uncommon, tho' they are of short continuance; but the Brisas never reach so far: and this renders the voyage from Paita to Callao so very long in all seasons. For if a ship stretches out to a great distance from the coast, the winds, even within ten or twelve leagues, shift from S. to S. W. but if she keeps along the shore, and endeavours to perform her voyage by tacking, she loses on one, what she gained on another. Besides, during the winter the currents set strongly towards the N. or N. W. and consequently render the voyage still more tedious. In summer there is here generally no current, or if any do set to the northward, it is scarcely perceived; the direction of the current in that season being generally W. This proceeds from the Brisas blowing from the N. of the equator, tho' they are unable to change the set of the current to the S. as would be the natural consequence, were it not for the resistance it meets with from the waters agitated by the S. winds to the southward of the equinoctial; but by meeting each other they run towards the W. There are, however, some short intervals during the summer, when the currents suddenly change their direction, and run to the southward, but at no great distance from the shore; and in the same instantaneous manner shift about to an opposite point; and this is the reason why most ships coming from Paita to Callao in this season keep near the shore, and work up to windward, hoping, by the favourable change of the currents, to acquire that assistance which the winds deny.

At all times this voyage is of a most disagreeable and fatiguing length; for tho' the distance according to the latitude of these ports, be only 140 leagues, a ship

ship is very fortunate to perform it in forty or fifty days ; and even if after spending that time in continual labour, she be not obliged to return again to Païta ; such accidents being very common ; and it is nothing extraordinary to meet with two or three misfortunes of the same kind successively, especially if the ships make a great deal of lee-way, when it is often a twelve month's task. They relate here a story to this purpose, that the master of a merchant ship, who had been lately married at Païta, took his wife on board with him, in order to carry her to Callao. In the vessel she was delivered of a son, and before the ship reached Callao, the boy could read distinctly. For after turning to windward, two or three months, provisions growing short, the master put into some port, where several months were spent in procuring a fresh supply ; and after another course of tacking, the same ill fortune still pursued him ; and thus four or five years were spent in tacking and victualling to the ruin of the owner, before the ship reached Callao. This misfortune was, in a great measure, owing to the ill construction of the ship ; and every other circumstance tending to obstruct her passage, the transaction has nothing very wonderful in it.

ACCORDING to observations made by Don George Juan at Païta, in the year 1737, its latitude is $5^{\circ} 5'$ S. It is a small place, having only one street, and about 172 houses ; and these only of Quinchas and canes covered with leaves ; the only house built of stone being that of the governor. It has a parish church and a chapel dedicated to our lady of mercy, and served by a religious of that order. A little to the southward of the town is a mountain, called from its figure Silla de Païta, or the saddle of Païta. The soil round Païta is wholly of sand, and extremely barren ; for besides the total want of rain, it has not a single river for the conveyance of water ; so that it is entirely destitute of that necessary fluid, unless what

is daily brought with great fatigue, from Colan, a town on the same bay, four leagues N. of Paita, and near which runs the river Chera, the same stream which waters Amotape. The Indians of the town of Colan are under an obligation of daily sending to Paita, one or two balzas loaded with water, which is distributed among the inhabitants by stated proportions. From the same town Paita has also the greatest part of its provisions. The nature of the soil, and the situation of the place render it extremely hot. Its inhabitants, who are about thirty-five or forty families, and consist of Spaniards, Mulattoes, and Mestizos, live chiefly by passengers going or returning from Panama to Lima. So that the town owes its whole support to the harbour, which, as I have before observed, is the place where the cargoes of goods sent from Panama are landed, together with those coming from Callao to the jurisdictions of Piura and Loja.

IN the bay of Paita, and that of Sechura, which lies a little farther to the southern, such large quantities of tollo are taken as to answer the demands of the provinces of the mountains, and part of those of Quito and Lima. The season for this fishery begins in October, when great numbers of barks go from Callao, returning when the season is over. Fishing is also the constant employment of the Indians of Colan, Sechura, and the small hamlets near the coast; these seas abounding in several kinds of fish, besides the tollo, all palatable, and some delicious.

CHAP. II.

Account of the Transactions at QUITO: unhappy occasion of our sudden return to GUAYAQUIL.

ON our arrival at Quito, we made it our first business to join the French company, who were pleased to express a great deal of joy at our return. Mr. Godin, during our absence, had finished the astronomical observation to the northward, and tho' Mefs. Bouguer and de la Condamine, had also gone thro' them, yet they still purposed to repeat them; for these able academicians, who had always shewn an indefatigable zeal for the perfection of the work. were particularly attentive in observing the greatest obliquity of the ecliptic; at which observations we also assisted; but several accidents hindered them from being carried on without interruption. They therefore thought it most agreeable to their character, and the commission with which they had been honoured, to spend some more time in ascertaining this important point, than to leave the country before their observations were compleated. Notwithstanding their stay was attended with so much inconvenience and fatigue, they could not think of leaving undetermined a difficulty, occasioned by a certain motion which they observed in the stars. In order to ascertain with the greater accuracy the quantity of the arch, they divided themselves into two companies, Bouguer being at the head of one, and M. de la Condamine accompanied by M. Berguin, at that of the other; the latter, while the geometrical mensuration was carrying on, applied himself with indefatigable labour, and admirable skill in drawing maps of the country, in order to erect the signals in the most advantageous places. He also assisted both companies

in their mensurations of the two bases, which served to prove the accuracy of the operations. And, lastly, he was present at making the astronomical observations. But before the repetition was undertaken, M. de la Condamine employed himself in erecting two obelisks at the extremities of the base of Yaruqui, as monuments of this transaction: This spot having been the foundation of the whole work. Various were the sentiments with regard to the inscription proper to be engraved on them; and indeed the difficulties attending this particular, seemingly of no great importance, were such, as could not be removed till the affair was intirely dropt on account of other things of real concern, and which would admit of no delay. It was however unanimously concluded, that the whole affair should be referred to his Majesty's pleasure after our arrival in Spain. Accordingly in the year 1746, the marquis de la Ensenada, equally distinguished as a statesman, and a patron of real knowledge, being at that time secretary of state for the Indies, sent over, in his majesty's name, the following inscription.

PHILIPPO V.

Hispaniarum, & Indiarum Rege Catholico.

LUDOVICI XV.

Regis Christianissimi Postulatis, Regiæ Scientiarum
Academiæ Parisiensis.

Votis Annuente, ac Favente.

LUDOV. GODIN, PETRUS BOUGUER,

CAR. MARIA DE LA CONDAMINE,

Ejusdem Academiæ Socii,

Ipsius Christianissimi Regis Jussu, & Munificentia.

Ad Metiendos in Æquinoctiali Plaga

Terrestres Gradus,

Quo vera Terræ Figura, Certius Innotesceret,

In Peruviam Missi;

Simulque

GEORGIUS

GEORGIUS JUAN S. JOHANNIS Hierosolymitani Ord.
Eques, &

ANTONIUS DE ULLOA,

Uterque Navium Bellicarum Vice-præfecti, et Mathematicis Disciplinis Eruditi.

Catholici Regis Nutu, Auctoritate Impensa ad ejusdem
mentionis Negotium eodem allegati Communi Labore,
Industria, Consensu in hac Yaruquensi Planitie
distantiam Horizontalem 6272 $\frac{5}{7} \frac{5}{2} \frac{1}{6}$ Paris.

Hexapedarum.

In Linea a Borea Occidentem versus grad. 19 min.
 $25\frac{1}{2}$ intra hujus & alterius

Obelisci Axes Excurrentem,

Quæque ad Basim primi Trianguli Latus Eliciendam
& Fundamenti Toti Operi jaciendum inserviret,
statuere.

ANNO CHRISTI MDCCXXXVI. Mense NOVEMBRI.
Cujus Rei Memoriam duabus hinc inde Obeliscorum
molibus extructis Alternum consecrari placuit.

“ In the reign of his catholic majesty Philip V.
“ king of Spain and the Indies; agreeable to the
“ request of his most christian majesty Lewis XV.
“ king of France, and in condescension to the desire
“ of the royal academy of sciences at Paris,
“ Lewis Godin, Peter Bouguer, Charles Maria de
“ la Condamine, members of that academy, were,
“ by the command and munificence of the most
“ Christian king, sent into Peru, to measure the
“ terrestrial degrees under the equinoctial, in order
“ to obtain a more accurate knowledge of the true
“ figure of the earth. At the same time, by the
“ command, and at the expence of his Catholic majesty,
“ were sent, George Juan, knight of the
“ order of St. John of Jerusalem, and Antonio de
“ Ulloa, both lieutenants in the royal navy, and
“ well acquainted with all the branches of the mathematics:
“ During the whole process of this mensuration they all equally shared in the fatigues,
“ hardships,

“ hardships, and operations ; and with an unanim-
 “ ous consent determined in this plain of Yaruqui
 “ a horizontal distance of 6272 $\frac{5}{2}$ $\frac{1}{6}$ Paris toises in
 “ a line whose direction was N. $19^{\circ} 25' 30''$ wester-
 “ ly, and intercepted between the axes of this and
 “ the other obelisque, as the base or side of the first
 “ triangle, and a foundation for the whole work.
 “ In the month of November 1736. In memory
 “ of which transaction an obelisque has been erected
 “ at each extremity of the said base.”

WE had now been three months at Quito, waiting till Mr. Hugot, instrument maker to the company, had finished some indispensable works in which he was then employed, that he might accompany us to the place where M. Godin, after finishing the observations, had left the instrument, which required some repairs in order for our making use of it in finishing our part of the work. But on the 5th of December 1741, when we were animated with the hopes of concluding our task in two or three days, the melancholy news arrived at Quito, that Païta had been pillaged and burnt by a squadron of men of war commanded by commodore Anson ; and was too soon confirmed in all its circumstances, by letters from the Corregidor and other officers of Piura, giving an account that on the 24th of November, at two in the morning, the Centurion man of war, being the commodore's ship, had entered that harbour, and sent her long-boat a shore with forty armed men, under the advantage of the night, whereby the inhabitants and strangers who happened to be in the place, were waked from their sleep by the shocking surprize of an invasion, the first notice of which were given by the cries of a negro ; so that filled with confusion and terror, like persons unable to recollect themselves, most of them had leaped from their beds, and fled naked from their houses, without knowing whether their enemies were in possession of

of the town; or whether by a vigorous resistance they might not be repelled: The mind, on so great and sudden a perturbation, being but little capable of such reflections.

Nor so Don Nicholas de Salaza, the accomptant of Piura, who happened to be then at Paita, on some affairs of his office. This gentleman attended only by a negro slave, with an equal presence of mind and resolution, threw himself into the little fort, built for the defence of that small town, and fired two or three shot towards the place where he heard the noise of the oars. Upon this the long boat stopped; but the fort was obliged to give over firing for want of hands to assist an officer who had shewn so generous an example of resolution. The English, concluding very naturally, that the fort was also abandoned, landed about half a league N. of the town, to which they immediately marched, and finding it forsaken, entered the fort, where, for fear of any surprize, they kept themselves all night. But the inhabitants thought of nothing but saving their lives, and accordingly fled to a mountain, betwixt the Silla and the town, where they concealed themselves, except a few slaves, who finding that the enemy were all retired into the fort, took the advantage of the night, and boldly returned into the town, bringing off such arms and effects of their masters, as the night would permit, hiding in the sand what they found too heavy to carry up to the top of the mountain.

THERE was unfortunately then at Paita great quantities of meal, fruits, and brandy, consigned to the provinces of the mountains, by the way of Piura; besides other goods deposited in the ware-houses to be sent to Panama. There was also no small quantity of gold and silver. As soon as daylight returned, the English left their retreat, and seeing every place forsaken, they began to enter the

houses, which are so many magazines for goods. It was not long before they met with a quantity of brandy and wine, of which, like men whose appetites are not to be governed at the sight of plenty after long distress, they made a very licentious use, and became so greatly inebriated, that the mulattoes and negro slaves, seeing their condition, abandoned their fears, and became so familiar with the English sailors as to drink with them, whilst others carried off hampers filled with the goods of their masters, together with considerable quantities of gold, which they buried in the sand. The long-boat, however, returned on-board the ship, but her chief spoils consisted of provisions; and the men employed in that service, regaled themselves with a degree of intemperance equal to those who guarded the fort.

THE inhabitants of Paita, who still timorously continued on the mountain, though in want of every thing, dispatched an express to Don Juan de Vinatea y Torres, the corregidor of Piura, and a native of the Canaries, who agreeably to his known character of prudence and intrepidity, immediately assembled all the militia of that city and its dependencies, and hastened by forced marches, through a troublesome sandy road of fourteen leagues to Paita. The English had been three days masters of Paita, when discovering these succours, and being informed by the negroes and mulattoes, that the militia of Piura, headed by a famous general, were coming to dislodge them from the town, enraged at this, but wanting courage to defend what they had gained, or rather surprized, carried off whatever they could, and took their leave of the place by ungenerously setting fire to the houses; an action which could reflect but little honour on the arms of their nation; but was rather a malicious transaction, to revenge on the poor inhabitants the coming of the militia whom they did not dare to face. No body indeed
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imagined

imagined at that time that this proceeding was in consequence of any orders issued by the commander, and it was afterwards known that he was under great concern for such unjustifiable behaviour.

THE corregidor of Piura, as he had been very active in the defence of Paita, so he lost no time in sending advice of the descent to the corregidor of Guayaquil, that he might put that city in a posture of defence; it being natural to suppose, that the English would also make an attempt there, as it had always been attacked by every enemy who before infested those seas. Accordingly the inhabitants of Guayaquil were soon in arms, and the best measures taken with the utmost expedition. But the force of the enemy being uncertain, no other ship having been seen at Paita than that which entered the port, the corregidor and magistrates applied for assistance to the president and audience of Quito; who among other measures for securing Guayaquil from the rage of the English, required us in his majesty's name, to repair immediately to that city, and take upon us the command of the troops, all the jurisdictions having received orders to send their contingences; and to direct the works to be raised, and the trenches necessary to be thrown up in the places most advantageous and most exposed.

As affairs of this nature admit of no delay, we immediately prepared for the journey, and leaving Quito the 16th of December, arrived at Guayaquil on the night of the 24th. But the passage of the mountains was inconceivably fatiguing; the natural difficulty and badness of the roads, it being the beginning of winter, having been greatly increased by the violent rains.

HAVING gone through all the necessary operations, and taken the most proper measures to defeat the attempts of an enemy, and such as we had the pleasure of seeing approved by the council of war held

held in that city, our longer stay only hindered the conclusion of our grand design, and was of no further use here, especially as it was then certainly known that the enemy's squadron had sailed for Manta, the coasts of which, though in the jurisdiction of Guayaquil, are nearly twenty eight leagues N. of that city, and consequently to leeward of it. It was also known that the fleet intended to proceed from Manta to Acapulco. Impatient at the loss of time we applied to the same council of war, who were pleased to grant leave for one of us to return to Quito, in order to complete the observations still remaining, that on any subsequent exigency we might be the more disengaged; but at the same time thought it necessary that one of us should continue on the spot to act on any sudden emergency. The matter was soon agreed on between Don George Juan and myself, namely that he should remain as commandant of Guayaquil, while I returned to continue the observations at Quito. But before I proceed, it will not be amiss to give an account of the transactions of the enemy's squadron in those seas, according to the depositions of some prisoners whom they set ashore at Manta.

THIS squadron as its entrance into the south-sea, besides being dispersed, was in a very shattered condition; but arrived successively at the island of Juan Fernandes, to the number of four ships, from fifty to sixty guns, the Centurion and the Gloucester, a frigate between thirty six and forty guns, and a victualler. These ships came to an anchor close to the shore, their crews being very much diminished, and those which remained very sickly. Tents were pitched, a kind of village built with an hospital for the recovery of their men. They arrived at this island in the month of June, and the commander was so quick in his prosecution of hostilities, that as soon as a number of sailors sufficient to man the frigate were recovered,

covered, she was sent out on a cruize; and this being in the common tract of ships bound from Callao to the coast of Chili, they had the good fortune to take two or three, all of them richly laden, particularly the Aranzaza, one of the largest employed in these seas. Great numbers of men died on the island of Juan Fernandes, but on the recovery of the remainder, and the ships being careened, they sunk the victualler, and some time after the frigate, putting the guns and provisions on board the Aranzaza. After this the whole Squadron put to sea upon fresh enterprizes, and about eight or nine vessels fell into their hands; and between Païta and the island of Lobos, they took a coast ship of great value. The sacking of Païta was the last act of hostility they committed in these parts; for the English commodore having procured intelligence of the short time requisite to alarm Guayaquil, and finding that there had been abundantly more than sufficient, prudently abandoned a design, against which he judged insuperable precautions had been taken; and indeed had he made an attempt, in all probability those spirits would have been depressed, which were so greatly elevated at their success at Païta.

AFTER leaving Païta they steered for the coast of Manta, where they put the prisoners they had taken in the merchant ships on board a long-boat, to make the best of their way to the land; the ships keeping ten or twelve leagues from the shore; but many of the sailors, negroes, and mulattoes, who had nothing to lose, voluntarily entered with them. They now determined to sail for the Philippines, in order to intercept the galleon in her return to those islands, and which was to sail from Acapulco some time in January. This was doubtless the most advantageous scheme that could be formed in their circumstances. But in this they were disappointed by the Vice-roy of Mexico; who, from the intelligence

gence sent by the Vice-roy to Peru to all the ports on the coast of the south-sea, as well as by expresses dispatched from Guayaquil and Atacames to Panama, deferred sending the ship that year; which the enemy being apprized of, they burnt the Aranzazu, as they had before the other prizes, and continued their voyage towards the Philippines, where by a long perseverance in a most tedious cruize they accomplished their designs. For the Acapulco ship returning when all the danger was imagined to be over, fell in with the Centurion, and after a short, though smart engagement, was taken.

BUT to reassume the thread of the narrative, to which I hope this has been no disagreeable interruption. On the 5th of January 1742, I set out from Guayaquil for Quito, being the very worst time of the year for performing that journey; and as such I experienced it by several misfortunes. In one of the rivers we were obliged to ford, the two mules which first entered were swept away by the current, and that which carried my portmanteau was lost; and the other, on which an Indian rode and led the former, swam with great difficulty to the shore, and the Indian saved himself by holding fast by the creature's tail; in which manner they were carried near a quarter of a league below the ford. If the travelling up the mountains was not attended with such imminent danger, it was extremely troublesome, a space of about half a league, having taken me up from seven in the morning till seven in the afternoon, the mules though light falling at every step, nor was it an easy matter to make them rise. And soon after the creatures became so fatigued, they even sunk under their own weight. At length I reached Quito on the nineteenth of the same month; but had hardly alighted from the mule with the hopes of resting myself after these dangers and fatigues, when the president informed me,

me, that three days before he had sent away an express, with letters from the Vice-roy, directing us to hasten to Lima with all possible expedition; and charging him in particular to provide immediately every thing necessary that our journey might not be a moment delayed. It was therefore no time to think of rest; and accordingly after making such provisions as were absolutely necessary, I set out on the 22d of the same month, and a third time crossed that difficult mountain in my way to Guayaquil; where having joined Don George Juan, who was included in the orders, we travelled night and day, with a dispatch answerable to the governor's impatience, all the towns on the road having received orders to keep beasts in readiness, that we might not be detained a moment; and accordingly we reached Lima the 26th of February. In the mean time the Vice-roy had ordered a Squadron of four men of war to sail from Callao to Panama, for the defence of that place, which fleet touched at Païta, in order to gain intelligence of the enemy's ships, having orders to attack them if possible; but, as we have already observed, they were failed to the coast of Acapulco. On our arrival the Vice-roy was pleased to express great satisfaction at our dispatch, and to honour us with several commissions suitable to the exigence of affairs; giving us the command of two frigates which he had ordered to be fitted out for the security of the coast of Chili, and the island of Juan Fernandes, against any reinforcement coming to the enemy. For though commodore Anson had made no secret of his intentions to the prisoners, and they had eagerly published them, no dependance could be had on informations given out by the enemy himself, and which were the more suspicious as he told them openly. Besides it was well known, that this Squadron originally consisted of more ships; and we were apprehensive,
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that though the remainder had failed of reaching these seas, yet by perseverance, and a second effort, they might succeed.

COMMODORE Don Joseph Pizarro, had also been disappointed in getting into these seas this year, though he had attempted it in a single ship called the *Asia*; but was obliged to put back to Buenos Ayres with the loss of one of his masts, and another was carried away just at the mouth of the Rio de la Plata. These disappointments rendered it the more necessary for the Vice-roy to provide for the defence of the coast of Chili, as all ships must pass near it in their course to Peru.

CH A P. III.

Voyage to the Island of JUAN FERNANDES; with an Account of the Seas and Winds in that Passage.

AMONG other precautions taken by the vigilant Vice-roy of Lima, for the defence of the south-sea, he fitted out, as we have just mentioned, two frigates for cruising on the coast of Chili; and gave the command of one, called *Nuestra Senora de Belen*, to Don George Juan, and appointed me for the other called the *Rosa*: they had been both merchant ships employed in these seas, all the king's ships being sent in the Panama Squadron. They were between six and seven hundred tons, each carried thirty guns on one deck, and three hundred and fifty men, all picked and expert sailors. The ships were also prime sailers: so that our force was in all respects sufficient for the service on which it was employed; and, with the assistance of providence, would doubtless have answered the Vice-roy's expectations.

ON the 4th of December 1742, we got under sail intending to steer first to the island of Juan Fernandes. Our course was from S. W. one quarter westerly, to S. one quarter westerly, according as the winds permitted, which were continually between the E. S. E. and S. S. E. but not always of the same strength; sometimes short calms intervened, and at others sudden squalls, but did us no great damage. This course we continued till the 27th of the same month, when being in the latitude of 30° and a little more than 15° W. of Callao harbour, and the wind at N. W. we altered our course, steering E. S. E. and E. till we made the island without that of Juan Fernandes. This happened on the 7th of January 1743, at three in the evening; the S. point of the island bearing N. E. one quarter easterly, and the N. W. point, N. E. We now continued steering E. one quarter northerly, and the next day at eleven in the morning we had sight of the other island called de Tierra, bearing E. N. E. And in the following night having weathered the north point, we the next day came to an anchor in the bay.

DURING our passage from Callao to the tropic we had light winds, often interrupted with short calms; but after we had crossed the tropic, they were more settled, stronger, and squally, but not dangerous; being of short continuance. But as I have already noticed in another part, they always blow from the S. E. and never from the S. W. till you are fifteen or twenty degrees W. of the meridian of Callao. When we concluded ourselves in the proper latitude for standing towards the islands, and found the wind at N. W. we steered E. in order to reach the meridian of Juan Fernandes. The wind then shifted round from W. N. W. to W. S. W. and S. and afterwards returned to its usual run of S. E. S. S. E. and S. E. one quarter easterly. On the 27th of December, the

the wind again veered to the N. W. and continued so the whole day; the two succeeding days at N. N. W. and N. W. but on the 30th veered to the W. N. W. On the 31st it shifted to S. S. W. and on the 1st of January veered round to the S. S. S. E. and S. E. Those therefore who endeavour to gain such winds, stand off from the coast till they fall in with them; and this sometimes happens at a greater distance than at others; I mean during the summer; for in winter a different course is necessary as we shall explain in the sequel.

THE atmosphere of these seas is generally filled with thick vapours to a considerable height: so that often for four or five days successively, there is no possibility of observing the latitude. These fogs the sailors call *Sures pardos*, and are fond of them, as they are a sure sign that the wind will be fresh and constant, and that they shall not be troubled with calms. At this time it is very common to see the horizon filled with a dark cloud, but of no dangerous consequence, except freshening the wind a little more than usual, and a short shower of rain; the weather, in four or five minutes, becoming as fair as before. The same thing presages the *turbonada*, or short hurricane; for the cloud is no sooner formed on the horizon, than it begins, according to the sailors phrase, *to open its eye*, i. e. the cloud breaks, and the part of the horizon where it was formed becomes clear. These *turbonadas* are most common after you are passed the 17th or 18th degree of latitude.

NEAR the tropic, that is between the parallels of fourteen or sixteen and twenty eight degrees, calms greatly prevail during the months of January, February, and even March; and in some years more than in others; but near the coast they are not so common, on account of the land breezes, which are always between the S. E. and E. S. E. Formerly,
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and even till within these few years, the voyage to and from Callao to Chili, was rarely performed in less than a twelvemonth; owing to a fear of standing off to a great distance from the coast: for by tacking along the shore they made but little way; and consequently laid the ships under a necessity of putting into the intermediate harbours for water and provisions; but an European pilot making his first voyage in the usual manner, observed that the course of the currents was from the W. and S. W. whence he concluded that winds from those quarters might be found farther off at sea. Accordingly in his second voyage he stood off to a great distance, in order to fall in with those winds, and had the satisfaction to find that he was not mistaken; so that he reached Chili in little more than thirty days. This being so very far short of the usual term, he was suspected of sorcery, and ever after called Brujo, a sorcerer. From this report, and the evidence of the dates of his papers, persons of all ranks were persuaded that he sailed by magic, and the inquisition caused him to be apprehended; but on examining his journals they applauded his sagacity, and were convinced that if others did not perform the same voyage with equal dispatch, it was owing to their timidity in not stretching off to a proper distance from the coast as he had done. And thus he had the honour of leading the way in that expeditious course which has ever since been followed.

In all this passage, you have an easy sea, the swell coming sometimes from the S. E. S. or E. being the points from whence the wind blows; at others from the S. W. and W. particularly after you are ten or twelve degrees from the coast. And it is only near the island of Juan Fernandes, that you meet with a hollow sea. The course of the waves is there sufficiently manifest; for on quitting the coast of Callao, to about six degrees farther to the S. their

course is to the northwards : but from between the parallels of sixteen and twenty degrees, their course is imperceptible ; while in higher latitudes they run, with some force S. and S. W. and with a greater velocity in winter than in summer ; as I know from my own experience, having in my second voyage to Chili, in the year 1744, at the end of October, and beginning of November, taken the greatest care, that the distances between the knots on the log line should be 47 Paris feet and a half, for measuring the ship's way ; but every day found that the observed latitude exceeded the latitude by account ten or fifteen minutes. The same observation was made by Don George Juan, in both his voyages ; as well as by the captain, and officers of the French ship, in which I returned ; so that the reality of the course of the sea is proved beyond exception ; and in this manner it continues to the 38th or 40th degree of latitude.

IN the latitude of $34^{\circ} 30'$ and $4^{\circ} 10' W.$ of Callao, you meet with a track of green water, extending N. and S. and along which you sail above thirty leagues. Probably it runs to a great distance in that sea, being found in every latitude to the coast of Guatemala ; but not always under the same meridian, winding away N. W. It is also met with in a higher latitude than that of Juan Fernandes ; and it has also been observed by ships in their course to Chiloe, or Baldivia.

IN this passage, tho' part of it be at such a great distance from the land, we meet with a kind of birds called Pardelas, which distinguish themselves from all other species, by venturing so far from the land. They are something larger than a pigeon ; their bodies long ; their necks short ; their tails of a proper proportion, and their wings long and slender. There are two sorts of these birds, and of different colours, one parda or brown, from whence they derive their name ; the other black, and called pardela gallinera, but in other

other circumstances they are entirely the same. A smaller bird is also seen in these seas, called *Alma de Maestre*; it is white spotted with black, and has a long tail; but is not so common as the *Pardelas*: They are most frequent in stormy weather. Within ten leagues of the islands of *Juan Fernandes*, are seen some *balenatos*, or small whales; and at near the same distance, sea-wolves; but the latter seldom go far from the shore.

Tho' this sea has not been improperly dignified with the appellation of *Pacific*, with regard to the interval between the tropics; yet that particular cannot with any justice be applied to it, if considered in its whole extent: tempestuous weather being equally common in the latitudes of twenty and twenty-three degrees in the south sea, as in the oceans of Europe; and in higher latitudes storms are more frequent and violent. I am inclined to think that the first Spaniards gave it the name of the *pacific sea*, from their being greatly pleased with its smoothness, and the gentleness of the winds in their first voyages; concluding that it was so in every part; but the fury of the winter storms, and the roughness of the sea, which are equal to those in any other parts, abundantly demonstrate, that they formed a judgment too hastily.

ALONG these coasts and the adjacent sea, the winter begins at the same time as at *Lima*; that is in the month of June, lasting till October and November; but its greatest violence is past in August or September. During the whole winter season, there is no dependance on being safe from storms, which rise with a sudden rapidity; and in all latitudes beyond forty degrees, the winter sets in considerably sooner, even at the beginning of April, and is also observed to last longer.

THE winter in all latitudes beyond 30° is ushered in by northerly winds. They are not indeed fixed like those of the S. though common to the season. They

always blow with great violence; but not always with the same degree: being less strong in the beginning than in the depth of winter, when their rage strikes the most resolute with horror, and raises such enormous waves, that the atmosphere is crowded with vapours; and these turn to a drizzling rain which lasts as long as the storm continues. It often happens that these violent N. winds, without the least sign of an approaching change, shifts round instantly to the W. which change is called the *travessia*, but continues to blow with the same force. Sometimes indeed this sudden change is indicated by the horizon clearing up a little in that quarter: but in seven or eight minutes after the appearance of this small gleam of light, a second storm comes on; so that when a ship is labouring against the violence of a storm from the N. the greatest care must be taken, on the least appearance, to prepare for the *travessia*; indeed its rapidity is often such as not to allow time sufficient for making the necessary preparations, and the danger is sufficiently evident if the ship has her sails set, or is lying too.

In the month of April 1743, in the latitude of 40° , I had the misfortune of experiencing the fury of a storm at N. which lasted in its full violence from the 29th of March till the 4th of April. Twice the wind shifted to the *travessia*, and veering round to the southward, returned in a few hours to the N. The first time it shifted to the W. the ship by the vortices formed in the sea by this sudden opposition to the course of its waves, was so covered with water from head to stern, that the officers who were on the watch concluded she had foundered; but fortunately we had our larboard tacks on board, and by a small motion of the helm, the ship followed the change of the wind, and brought too without receiving any damage; whereas we should otherwise in all probability have been lost. Another circumstance in our favour was, that the wind was some points to the westward of the N.

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For tho' these winds are here called *nortes*, they are generally between the N. and N. W. and during their season, veering in some squalls to the N. and in others to the N. W. Sudden calms also often intervene; but if these happen before the wind have passed the *travesia*, it returns in about half, or at least an hour with redoubled fury. These dangerous variations are however indicated by the thickness of the atmosphere, and the dense clouds in the horizon. The duration of these storms is far from being fixed or regular: tho' I well know some pilots here will have it, that the N. wind blows twenty-four hours, and then passes to the *travesia*; that it continues there with equal violence three or four hours, accompanied with showers, which abate its first violence; and that it then veers round till it comes to the S. W. when fair weather succeeds. I own indeed that I have in several voyages found this to be true; but at other times I experienced, that the successive changes of the wind are very different. The storm at N. I before-mentioned began March the 29th, at one in the afternoon, and lasted till the 31st at ten at night, which made fifty-seven hours; then the wind shifted to the *travesia*, where it continued till the 1st of April without any abatement, that is, during the space of twenty-two hours. From the W. the wind veered round to the W. S. W. and S. W. still blowing with its former violence. Hence a short calm succeeded; after which, it a second time shifted to the N. where it continued blowing with its former fury fifteen or twenty hours; then came on a second *travesia*; and soon after its violence abated, and the next night shifted from S. W. to S. E. Thus the whole continuance of the storm was four natural days and nine hours; and I have since met with others of the same violence and duration, as I shall mention in their proper place. What I would infer from my own experience, confirmed by the information of several pilots, is, that the duration of

these storms is proportional to the latitude; being between 20 and 30 degrees, neither so violent nor lasting as between 30 and 36; and still increasing in proportion as the latitude is greater.

THESE winds have likewise no regular or settled period, the interval betwixt them being sometimes not above eight days; at others much longer; nor do they always blow with the same violence; but are most uncertain in the winter, rising suddenly when least expected, tho' not always blowing with the same force.

In this sea a change of the wind from N. to N. E. is a sure sign of stormy weather; for the wind is never fixed in the N. E. nor does it ever change from thence to the E. its constant variation being to the W. or S. W. contrary to what is seen in the northern hemisphere. Indeed in both the change of the wind usually corresponds with the course of the sun; and hence it is, that as in one hemisphere it changes from E. to S. and thence to the W. conformable to the course of the luminary, so in the other it changes, for the same reason, from the E. to N. and afterwards to W.

It is an old observation among the pilots of this sea, that a day or two before the N. wind begins to blow, there is always seen along the shores, and about the ships, a sort of sea fowl, called *quebrantahueffas*, i. e. ossirage, or break bones. These birds seldom appear at other times. I am little inclined to believe, much less to propagate any vulgar report; but here I must declare, that after repeated observations, in order to discover the truth or falsity of this assertion, I always saw them before every storm I met with here; and sometimes even a day before, when there was not the least appearance of the winds coming about to the N; and as the winds increased, great numbers of them gathered about the ship, sometimes flying round her, at others settling on the waves, but always kept near the ship, till fair weather returned. It is still more singular, that they are never seen either on the
sea

sea or land, except in stormy weather; nor is it known where they hide themselves when it is fair, that they should so immediately cover, as it were the sea, when their natural instinct informs them of the approach of a N. wind.

THIS bird exceeds the size of a large duck, has a short thick arched neck, with a large head, and a thick but short bill, a small tail, a rising back, large wings, and small legs. They are by their plumage, divided into two different kinds, one being white, spotted with dark brown, and the upper part of its wings entirely of the latter colour: the breast of the other, together with the inside of the wings, the whole head, and the lower part of the neck is white; but the back, the upper parts of the wings and neck of a very dark brown, and are hence called *lamo prieto*, black-backs. The last kind are, by the pilots, accounted the most certain sign, the others being often seen without any alteration of weather immediately succeeding. I well knew a pilot here, who was a native of Callao, a man of indefatigable curiosity and exactness, never omitting to insert in his journals the most minute circumstances. His name was Bernardo de Mendoza, and with him these fowls were considered as so sure a sign, that when he was in any of these ports, and his ship ready to put to sea, it was his constant custom to take a walk on the shore, to see whether he could perceive any of them in the offing; and if he did, he continued in the harbour till the tempest was over; and he assured me, that his conforming to this observation had been of the greatest advantage to him; relating, in confirmation of his opinion, that being once at Baldivia, the governor so far from regarding his apprehensions from such presages, turned them into ridicule, and insisted on his putting to sea; but was soon convinced that these omens were not chimeras, for the vessel was hardly out of the harbour when a storm at N. came

on with such violence, that it was with the utmost difficulty she was saved from being wrecked in that bay; and this would infallibly at last have been the consequence had the storm continued some time longer; for even when the wind abated, they found it hardly possible to carry her into the harbour to repair the damages she had received.

OTHER observations relating to these northerly winds are, that they always blow when the fures are in their strength, in the higher latitudes, and also between the parallel of 20° and that of Panama, it being then winter in those climates; and are also found in latitudes beyond 20° but never nearer to the equinoctial. Another observation is, that during the time of the Brisas, between Panama and the equinoctial, these winds are never felt in any part of the pacific sea, the S. winds alone prevailing there. Lastly, it is observed that within thirty or forty leagues of the coast of Chili, while one part is agitated with storms at N. the S. winds freshen in another. This, however singular it may appear, is no more than what was experienced by the three ships, *Esperanza*, *Belen*, and *Rosa*, which being at the mouth of the bay of conception, the latter took her leave of them and bore away, with a fresh gale at S. to Valparaíso, whilst the others who steered for the islands of Juan Fernandes, were overtaken in their passage by a storm at N.

As in summer the S. winds generally shift between the S. S. E. and E. S. E. so, in winter, they continue for some time between the S. W. and S. consequently there is a necessity, in the latter season, to stand out to such a great distance from the coast in quest of them as must be done in summer.

CH A P. IV.

*Account of the islands of JUAN FERNANDES :
Voyage from those Islands to SANTA MARIA,
and from thence to the Bay of CONCEPTION.*

THE islands of Juan Fernandes, which, on account of their situation, belong to the kingdom of Chili, are two in number. One as lying farther to the W. is distinguished by the epithet de Afuera; and the other as nearer the land, or to the eastward, is called la de Tierra. The former, which is something above a league in length, is nearly of an oval figure, and the land very high, so that it has the appearance of a round mountain; and its steepness on all sides renders it every where almost inaccessible. Several large cascades tumble from its summit, and the water of one of them, after a succession of long falls among the rocks on the S. W. side of the island, precipitates itself into the sea, with such amazing impetuosity, that its froth may be seen at three leagues distance. The longitude of this island, according to the reckoning of Don George Juan, admitting the currents to set towards the S. W. is $3^{\circ} 20' W.$ from the meridian of Callao; but according to my computation, $3^{\circ} 27'$ By the coast we steered from the meridian de Afuera till we reached la de Tierra, we concluded the distance between those islands to be thirty four leagues.

THE island de Tierra, which is about four hundred and forty leagues to the N. of Cape Horn, is between three or four leagues from E. to W, which is its greatest length. It is for the most part high land, but not destitute of some plains, though these are part of the mountains themselves. Its valleys are full of trees, and some of them of excellent timber. Here is likewise the piemento tree resembling the
Chiapa

Chiapa in new Spain. The plains and little hills produce a sort of straw, resembling that of oats, and growing higher than the usual stature of a man. The water, of which several streams fall from the eminences into the sea, is very light, creates an appetite, and, among other medicinal qualities, is excellent against indigestions. Here are many dogs of different species, particularly of the greyhound kind; and also a great number of goats, which it is very difficult to come at, artfully keeping themselves among those crags and precipices, where no other animal but themselves can live. The dogs owe their origin to a colony sent thither not many years ago, by the president of Chili and the vice-roy of Peru, in order totally to exterminate the goats; that any pirates, or ships of the enemy might not here be furnished with provisions. But this scheme has proved ineffectual, the dogs being incapable of pursuing them among the fastnesses where they live, these animals leaping from one rock to another with surprising agility. Thus far indeed it has answered the purpose; for ships cannot now so easily furnish themselves with provisions here, it being very difficult to kill even a single goat.

VERY few birds frequent this island, and though we found several white feathers on the ground, and also parts of carcasses which seemed to have been gnawed by the dogs, we saw but very few flying, and those wholly black. It is not indeed improbable, but these islands may be the winter retreats of some kinds of birds, which on the approach of summer remove to another climate.

IN this island are mountains of a great height; and the sides of those towards the N. are covered with trees of good timber; but few or none are seen on those of the S. part, except in the breaches and valleys; owing doubtless to the piercing violence of the S. winds, which destroys them or checks their growth.

growth. On the other hand, every part is cover'd with tall grafs or ſtraw, already mentioned. Among the various ſorts of trees with which the iſland is decorated, there are none of the American fruit trees; owing to the coldneſs of the climate, which is increaſed by the violence of the winds, ſo that even the heats of ſummer are moderate.

In this iſland are three harbours or bays; but thoſe on the W. and E. ſides have only water ſufficient for ſmall veſſels; ſo that the only one proper for large ſhips is that on the N. or rather N. E. ſide of the iſland. The latter, which is properly called Juan Fernandes, conſiſts of a bay formed by the coaſt, but expoſed to the N. and N. E. winds; ſo that in winter no ſhip can lie ſafely in it; and even in ſummer, it is not free from danger, on account of the great depth of water; for within the diſtance of a cable's length or two from the ſhore, it has fifty fathom; and growing deeper as the diſtance increaſes. To this muſt alſo be added the badneſs of the ground, which being of ſand, and a tenacious mud, mixed with ſhells and gravel, the cables are greatly rubbed by it; and conſequently the anchorage rendered unſafe. The ſhips are alſo expoſed to continual ſqualls cauſed by the Sures, which produce a very troubleſome ſea: violent currents likewiſe ſet into the bay and form dangerous eddies. Laſtly, the ſteepneſs of the coaſt renders it very difficult to be approached on account of the daſhing of the waves againſt it; and accordingly the only ſhips that put into this port are ſuch as belong to pirates or the enemy; this iſland being the ſole refuge for them in the ſouth ſeas. And they expoſe themſelves to theſe dangers, merely through the neceſſity of taking in water and wood, reſreſhing their crews, and furniſhing themſelves with fiſh, which is caught here in great abundance.

THESE foreign ſhips, which in order to reſreſh their crews after the fatigues of ſo long a voyage,
and

and the dangers of weathering Cape Horn, make for the harbour of Juan Fernandes, are very careful to secure themselves against the above mentioned dangers, and therefore sail up to the farthest part of the bay, where they moor with an anchor in the water, and another on the S. W. shore. But even this precaution is not sometimes sufficient to secure them, as appears from the wrecks of three ships; two of which have been long there, but the other of a more recent date.

THE island de Afuera is every where prodigious high land, and the shores so steep and craggy, as to afford no convenient landing place; which, together with its having no harbour, prevents all ships, whether those of the enemy, or the country from touching at it.

THE sea all round the island de Tierra may be said to be filled with sea-wolves, of which there are observed to be three principal species; the first are small, not being above a yard in length, and their hair a dark brown: those of the second are about a toise and a half in length, and of a greyish brown colour: and those of the third are in general two toises in length, and the hair of a pale ash-colour. The head of these creatures is too small in proportion to the rest of their body, and terminates in a snout; which bearing a great resemblance to that of a wolf, they have acquired the name. The mouth is proportioned to the head; but the tongue is very thick and almost round. They have a row of large pointed teeth in each jaw, two thirds of which are in alveoli or sockets; but the others, being the most hard and solid, are without them. This threatening appearance is heightened by whiskers like those of cats, or rather tigers. Their eyes are small; and their ears, from the root to the extremity, not above six or eight lines in length, and of a proportional breadth. Their
nostrils

nostrils are also very small; and the only parts destitute of hair, these having a glandulous membrane like the same part in dogs. This creature has two fins, which serve them both for swimming in the water, and for walking on the ground. The tail, which is every where equally cartilaginous, is of a length proportional to the body, but much thicker than those of the generality of fish. They carry it horizontally; so that by inverting the last vertebræ, where the articulations are more flexible than in other parts, they form of it a kind of hind feet; and at the same time the fins helping them before, they walk without trailing the body along the ground. A remarkable particular in the formation of this amphibious creature is, that in both the fins and the extremity of the tail there are protuberances resembling fingers, they are small bones or cartilages inclosed within those callous membranes which cover the fins and tail. These fingers they can expand so as to cover the whole breadth of the fin; and thus form as it were the sole to tread upon. At the end of each is a nail of about two lines in length, and half a line in breadth.

AMONG the several articulations in the fins are two very remarkable, one at the junction of the Omoplata, where it forms a kind of shoulder, and the other at the extremity of the fin, where the fingers are connected. The same œconomy is observed in the tail; and thus they are adapted to an amphibious life: accordingly, tho' not with a celerity equal to that of quadrupeds, they climb up steep rocks of a height one would think them impracticable to such creatures, as they are absolutely so to men; and come down again with the same ease, notwithstanding their great bulk and fatness, which is such in the larger species, that their diameter at the fins is little short of a yard and a half.

THEIR organs of generation are placed at the lower
extremity

extremity of the belly, and at the time of coition, the male and female place themselves on their tails with their faces inward, embracing each other with their fins, which, on this occasion, supply the place of arms. The female brings forth and suckles her young in the same manner as terrestrial creatures; but has never above one or two at a time.

THE largest species are by some called sea lions, but in these seas their general name is Lobos de Aceyte, or oil wolves; because when they move they appear like a skin full of oil, from the motion of the vast quantity of fat or blubber of which their enormous body consists. And tho' oil is made from all the species, none yield it in proportion to these; indeed they consist of little else. I was once entertained with a particular circumstance relating to this species. A sailor having wounded one, it immediately plunged itself into the sea; but had hardly tinged the water with its blood, when it was surrounded in an instant by shoals of the other two species, who attacked and devoured it in a few minutes, which was not the case with the other species; which, when wounded, though they also plunged into the water, yet the sight of their blood had no effect on others; nor were they ever attacked. They are mischievous, and their bite the more dangerous, as they never let go their hold; but they are heavy, torpid, and sluggish; nor can they turn their heads without great difficulty. They were so far from avoiding our men, that they were obliged to strike them with sticks to make them move out of their way. The cry of their young very nearly resembles the bleating of a sheep; but when they all join, as it were in concert, the noise is insupportable. They are the chief food of the dogs, who after killing them, take off their skin with great dexterity. In their attack, they aim always at the throat; and when they have destroyed the creature, they tear the skin all round
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the neck; then seizing it by the head, and putting their fore-feet between the skin and the flesh, they strip it entirely off, and then devour the carcase.

THE largest kind, as we have already observed, are, by the sailors, called sea lions, the hair of the neck distinguishing them from the others, and has some resemblance to a mane, though not much longer than that on the other parts of the animal; but as their whole body has a greater similarity to that of the wolf, and being entirely like the other species, the name of sea wolf, seems to me more proper than that given them by the seamen.

ALL these kinds of sea-wolves, have so tender a sensation at the extremity of their nostrils, that tho' they will bear many wounds in other parts of the body, the slightest stroke on this dispatches them; and that they are sensible of it is evident from their making it their chief care to defend that part from any violence.

A GREAT singularity is also observable in the dogs of this island, namely that they never bark. We caught some of them, and brought them on board; but they never made any noise till joined with some tame dogs, and then indeed they began to imitate them, but in a strange manner, as if learning a thing not natural to them.

THE islands of Juan Fernandes abound greatly in fish; among which are two species, not observed in any other part of this vast sea. One is the cod, which, tho' not absolutely like that of Newfoundland, the difference is very minute, either with regard to colour, form, taste, and even the small scales observable on that fish. They are of different sizes, but the largest three or four feet in length.

THE other species is a fish resembling the tolle in shape, but much more palatable. From the fore part of each of the two fins on its back, grows a kind of triangular spur, a little bent, but round near the back, and terminating in a point. It has a fine gloss, and the hardness of a bone. At the root of it

is a soft spongy substance. This spur or bone, for it resembles both, is such a present remedy for the tooth-ach, that the point of it being applied to the part affected, it entirely removes the pain in half an hour. The first account I had of this singular virtue was from a Frenchman, who was my pilot; but as reason would not permit me to give credit, without experience, to a circumstance seemingly so void of probability, the asseverations of the man increased my desire of putting it to the proof, which I did several times, and always with success. I did not fail to communicate a discovery of such great benefit; and accordingly several of my acquaintance, who laboured under that excruciating pain, made trial of it, and found from it the same happy effects; with this particular circumstance, that soon after the application of the bone to the part affected, it became insensible of pain, a drowsiness succeeded, and they awaked free from the torture. I observed that the spongy substance at the root, during the operation, became gradually inflated, and softer than in its natural state, which could not be effected solely by the moisture of the mouth, the part put into it being compact, hard, and smooth as ivory. I am therefore inclined to think that it has an attractive virtue, which extracts the morbid humour, and collects it in the root. The common length of these anodyne spurs or bones is two inches and a half, of which one moiety, together with the root, is within the body of the fish. Each face of the triangle is about four lines in breadth. They are taken in the same plenty as the others.

THE abundance of fish about these islands is such, that two hours fishing in the morning, and as many in the evening, with only six or eight nets, procured not only a sufficiency for all the ship's company, but a considerable quantity remained for salting. The chief kinds are cod, berrugates, the spur fish, sole, turbet, jureles, and lobsters; besides an infinite
number

number of small fish, which covered the water: a circumstance the more surprizing, as there are such multitudes of sea wolves all along the coast, which live on nothing else. For tho' there is very little fishing near these islands, yet doubtless the constant ravages of such enormous creatures, may be thought at least equal to the capture of a large fishery.

These several species are all so delicate and palatable, that the epicure would be at a loss which to prefer. The lobsters are often half a yard in length, and are taken even with greater ease than the others. They are of an exquisite taste, tho' the meat is something hard. The berrugate is a large scaly fish.

WE continued at anchor near this island till the 22d of January, during which time, we reconnoitred every part of it, and particularly visited the place where the English had erected their tents, in order to discover any private signal they might have left for the information of any other ships that should afterwards touch at this island. The president of Chili had, with the same view, sent a ship hither some months before our arrival; but all they met with was two bottles, in each of which was a writing in cypher; and all we discovered were the piquets and poles of the tents; with their small wooden bridges for crossing the breaches, and other things of that kind. Both our frigates having taken in water and wood, we sailed at three in the afternoon for the island of Santa Maria, which we made on the 5th of February, and after carefully surveying it on all sides, continued our course till half an hour after seven of the same day, when we came to an anchor at Puerto Tome, on the E. side of the bay of Conception.

At our departure from the island of Fernandes, we steered first E. one quarter southerly, and the winds continuing between the S. and S. E. we tacked on the 23d and steered between the W. S. W. and S. S. W. but on the 27th being in the latitude of 35°

33' 30'' S. latitude, and a degree W. of the meridian de Afuera de Juan Fernandes, we observed the winds to shift from S. to S. W. accordingly we altered our course, steered E. and E. S. E. till the 31st day, when we found ourselves in the latitude of 36° 23' and about fifteen or twenty leagues N. W. of the bay of Concepcion. But the weather, which had been the same also the day preceding, was so hazy, that we could not see the other frigate. Sometimes indeed we discerned the colours, but without having any sight either of the hull or mast. This was however sufficient to assure us that they were within half a cannon shot of each other. This, and our being something to leeward of the bay, obliged us to stand to some distance off to sea; and thus we kept along the coast without venturing to approach it till the 5th, when at half an hour after nine in the morning, the weather cleared up, and gave us sight of Cape Carnero, bearing S. S. E. ten or twelve leagues; and the middle part of Santa Maria, N. E. one quarter northerly. We crowded sail towards the latter, and at eleven the frigates lay to. Cape Rumena bearing S. one quarter easterly distance four leagues, and Cape Lavapies E. one quarter N. E. distance two leagues. The S. point of the island of Santa Maria, bore N. E. four leagues distant, the N. point of the same island N. N. E. and a large rock without, N. one quarter easterly. Here we sent our long boat with orders to go betwixt the islands and the continent, and take a survey of it, and then join us in Concepcion Bay. Accordingly the frigates got under sail at twelve at noon, with a fresh gale at S. S. E. and soon after came to an anchor in the said bay.

Don George Juan, from his reckoning concluded that the island of Santa Maria, which lies in 37° 3' S. latitude, was 7° 10' E. of the island de Afuera de Juan Fernandes. Whereas I differed 14' from him, making it only 6° 56'.

To the N. W. of this island, at the distance of a league and a half, is a lofty steep rock, with several smaller at its foot; and one league and a half farther to seaward, also on the N. W. side of the island, is a shoal, which, though we at this time saw no breakers on it, we took care to keep at a proper distance. And in my second voyage in the year 1744, I had a clear view of it, for I not only saw the breakers, it being then low water, and the sea running high, but also a reef of rocks at the water's edge. The country pilots have assured me, that by steering in the middle between this shallow and the rock, there is a very safe channel, having in most parts fifty or sixty fathom water.

In my second voyage above-mentioned, on board a French frigate called *La Delivrance*, in the latitude of $36^{\circ} 54'$ and $2^{\circ} 24'$ W. of the island of Santa Maria, about half an hour after making our observations, we unexpectedly found ourselves in a track of thick water of a yellowish colour; which naturally occasioning a great surprize, we started from the table, being then at dinner, and hastened up to the quarter deck. It was now too late to put the ship about; she being in the very center of it. This shoal, as it appeared to us, stretched near two leagues from N. to S. and was about six or eight hundred toises over from E. to W. The colour of the water was of so deep a yellow, that after providence had happily carried us through it, we could easily distinguish it at a considerable distance. I must own our consternation was such from our concluding we were on a shoal, as there was all the appearance of it, that we had no thoughts of bringing the frigate to, till we had got our sounding line in order. In some parts the water was of a deeper yellow, as being more shallow. In others we could perceive rays of sea or green water, intermixed with that of the shoal. No chart has taken any notice of it; nor was it indeed before known

to any of the pilots of these seas, as they themselves acknowledged, notwithstanding their repeated voyages. We should therefore have been guilty of a great indifference with regard to the public safety, had we neglected to have given this account of it.

THE general winds between the islands of Juan Fernandes and this place, are the same as those which reign in the gulph; and which have been already described; but the currents are different, setting N. W. and this becomes the more perceivable in proportion as you approach nearer to the coast. From the island de Tierra de Juan Fernandes eastward, the water is greenish, and westward bluish. This I have myself observed several times, even when not in sight of the island; and also that the colour of the water changes with the meridian. Between the islands and the continent, I have frequently seen the water spouted up by the whales; an appearance which has been often taken for breakers.

WITHIN twenty or thirty leagues of the coast, we met with large flights of curlews; but this distance is the utmost limit of their excursions. These birds are of a middling bigness, mostly white except the breast and upper part of the wings, which are of a rose colour. Their heads are proportionate to their bodies, but their bill very long, slender, and crooked; and as small at the root as at the point. They fly in vast troops, and consequently are easily known.

THE coasts in general of this sea from Guayaquil to the southward are very difficult to be seen, except in summer time, being the whole winter covered with such thick fogs, that no object can be discerned at half a league distance. And this dangerous haziness extends often to the distance of fifteen or twenty leagues off to sea. But during the night, and till about ten or eleven in the morning, the fog is only on the land. At that time it moves farther to seaward, with a prodigious density resembling a wall, totally concealing every

every object on the other side of it: And the cautious mariner forbears to make his way thro' it, being uncertain whether he shall meet with clearer weather, as he approaches nearer to the coast.

THESE winter fogs on the coast of Chili, seem to be occasioned by the N. winds; they being observed always to thicken when those winds blow; and tho' the atmosphere be clear when the wind shifts to that quarter, it is instantaneously filled with those vapours; which continue without any diminution, till the S. winds set in, and have blown fresh for two or three days successively. But as in winter they are usually interrupted by the winds at N. W. and S. W. these vapours, so inconvenient to commerce, are seldom totally dispersed; and it is a common phrase among the mariners of these parts, that the N. is a filthy wind on account of the disagreeable vapours, with which it is loaded, and the S. is a cleanly wind, sweeping these nuisances from the coast and country, and purifying the air. I call these winter fogs, as they are equally common all along the coast from the parallel of twenty to the equinox, where no N. winds are known. And as I have already related of * Lima, all the inhabitants of the coast, live, during the winter, in a perpetual fog.

I SHALL conclude this chapter, with a table of the variations of the needle observed in my second voyage, in the frigate *La Delivrance*, from Callao, to Conception Bay.

South Lat. Long. from Callao. Variations and their Kinds.

Deg.	min.	Deg.	min.	Deg.	min.	
22	13 $\frac{1}{2}$	35 ¹	03	7	58	E.
25	37 $\frac{1}{2}$	349	51	9	22	
28	27	348	46	9	42	
32	10	350	45 $\frac{1}{2}$	9	58	

* Book I. Chap. VI.

Deg.	min.	Deg.	min.	Deg.	min.
32	52 $\frac{1}{2}$	351	14 $\frac{1}{2}$	9	06
33	51 $\frac{1}{2}$	352	32	10	00
35	06	354	39 $\frac{1}{2}$	11	10
36	57	000	47 $\frac{1}{2}$	11	15

DON George Juan, who sailed from Callao, with the *Delivrance*, as commander of the *Lys*, another French frigate, made the following observations.

South Latitude. Long. from Callao. Variations and their Kinds.

Deg.	min.	Deg.	min.	Deg.	min.	E.
12	06	000	00	8	52	
12	50	359	00	7	48	
23	00	350	00	6	00	
25	30	349	15	5	00	
27	00	348	30	5	15	
30	45	349	00	6	00	
33	30	352	20	7	10	

Without the island of Juan Fernandes.

33	50	356	00	8	30
33	40	000	00	10	30
33	45	002	00	10	45

On the coast of Valparaíso.

33	20	005	00	12	30
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THE sensible difference between these variations arose from the difference of the needles, by which they were observed; and the reasons for that difference have been considered in another place.

THE difference of the Meridians between Callao and Concepcion, appears from the series of observations made by us at Lima, and those by father Feville, at the same place, to be 3° 58' which is the eastern distance of Concepcion from Callao, yet in the maps of this country it is placed eight or nine degrees to the eastward, a mistake proceeding from a want of attention

tion in the pilots in observing the direction of the currents; and as these carry the ship towards the S. W. the pilots, when in the offing, begin to compute their distance from the coast. But this being in reality much greater than that given by the rhumb, they are afterwards under a necessity of steering towards the E. and thence their reckoning makes the port farther to the eastward than it really is; and the currents running sometimes with a greater velocity than at others, pilots often differ in placing the meridian of Conception, so that very few at first make the cape, tho' assisted by that chart, which they consider are the best. For all these draughts are laid down from the false conclusions of erroneous journals, no allowance having been made for the setting of the currents. The difference of latitude proves beyond contradiction the reality of the currents, and the degree of their velocity as I have already noticed.

ON the 26th of January the *Esperanza*, a Spanish frigate, commanded by Don Pedro de Mendinueta, came to an anchor in the harbour of Talcaguano, after her voyage from Monte-video in the river of Buenos Ayres, round Cape Horn, which she had performed in sixty-six days. On our arrival at Puerto Tome, an officer came on board the *Belin*, the very same night we came to an anchor; and the day following, being the sixth of February, our two frigates joined the *Esperanza*, at Talcaguano, and formed a little squadron under the command of Don Pedro de Mendinueta, according to orders from the vice-roy, who had received an account that the *Esperanza* lay ready at Monte-video, to proceed on her voyage that summer into the south sea, and that commodore Don Joseph Pizarro, with other officers were travelling over land to Santiago de Chili; which he had reached at the time of our arrival.

CHAP. V.

Description of the City of CONCEPTION, in the Kingdom of CHILI; with an account of its commerce, and the fertility of the country.

CONCEPTION, otherwise called Penco, was first founded by captain Pedro de Valdivia, in the year 1550. But the powerful revolts of the Indians of Arauco and Tucapel, obliged its inhabitants to remove to Santiago. They cannot, however, be charged with having quitted their settlement till they had been defeated several times by the Indians, in one of which they lost the abovementioned Pedro de Valdivia, who as governor of that kingdom, was commander in chief of the forces employed in the conquest of it. The same unhappy fate also attended Francisco de Villagra, who as Valdivia's lieutenant general had succeeded in the command. These misfortunes, and the superiority of the allied Indians, obliged the Spaniards to abandon Conception. The inhabitants however being desirous of possessing again their plantations in the neighbourhood of that city, and of which they used to make such large profits, petitioned the audience of Lima for leave to return to their original city. But had soon sufficient cause to repent of not having exerted their industry in improving the place whither they had retired, the Indians, on the first notice that the Spaniards were returned to the city, forming a powerful alliance under a daring leader, called Lautaro, took by storm a small fort, which was the whole defence of the city, and put all to the sword, except a small number who had fortunately escaped to Santiago. Some time after Don Gracia de Mendoza, son to the vice-roy de Mendoza, Marquis of Canete, arriving as governor of Chili, with a body of forces sufficient for making head against the Indians, restored the inhabitants of

Conception to their former possessions, with the greatest apparent security. But the year 1603 gave birth to a new and more general confederacy, by which means Conception, La Imperia, and Baldivia, with six smaller places, were destroyed; being the greatest part of the places in this kingdom. Conception however received fresh succours, the city was again repaired, and has continued ever since.

Its latitude, according to an observation we made in the year 1744 at Talcahuana, which lies exactly E. and W. with the city, is $36^{\circ} 43' 15''$ S. and its longitude from the meridian of Teneriff, according to Father Feuillee, $303^{\circ} 18' 30''$. The city is built on the S. W. shore of a beautiful bay, on an uneven sandy ground, and on a small declivity, having a little river running through it. The city in its extent, is scarce equal to one of the fourth class. The destruction it suffered in the dreadful earthquake of 1730, occasioned all the houses to be built low, tho' it had before been subject to these sudden convulsions of nature. This was, however, the last of those remarkable for their melancholy consequences, which extended to Santiago, the capital of the kingdom, which was involved in the same ruin. On the 8th of July at one in the morning the first motions were felt, and the concussions increasing, the sea retreated to a considerable distance; but in a small time returned so impetuously, and with such a swell, that it overflowed the whole city, and the neighbouring countries. In this sudden calamity the inhabitants had no other asylum than the neighbouring eminences. This inundation was soon succeeded by three or four shocks; and at about four in the morning, a little before day break, the concussions returned with the most tremendous violence, demolishing the few buildings which had withstood the first shocks, and the rapid motion of the sea.

THE houses are all either of topias or mud walls, or adoves, unburnt bricks; but covered with tiles.

The

The churches are small and mean ; the same may be said of the Franciscan, Augustine, and Dominican convents, as well as those belonging to the fathers of mercy : But the college of Jesuits is not wholly destitute of elegance, being well built and of a tolerable architecture.

THE political government of this city consists of a corregidor nominated by the king, and who is at the head of the ordinary alcaldes and the regidores. During the vacancy of this post, the duty is performed by the president of Chili, who is governor and captain general of the whole kingdom, and president of the audience of Santiago, on which as its capital, Concepcion is dependant. The court of audience was originally established in the latter, and continued there from the year 1567, to 1574 ; but the danger and disturbances, occasioned by the frequent revolts of the Indians, caused it for a while to be suppress'd, and afterwards to be removed to the city of Santiago. The president is however obliged to reside six months of the year at Concepcion, that he may attend carefully to the military concerns of the frontiers, see that the forts be in a good condition, and well provided with every thing, in order to keep the Indians of Arauco in awe, and that the military forces are in good order, and well disciplined, and always in readiness to repel any attempts of the Indians, provided they should ever abandon their dread of the Spanish troops. During the other six months, when the governor resides at Santiago, he acts in a very different character ; hearing complaints, redressing grievances, and administering justice, that this tribunal may receive the greater dignity from his presence. Here is also a chamber of finances, at the head of which is an accountant and treasurer. Besides which Concepcion has likewise all the other courts and offices usual in the cities of South America.

As all the inhabitants of the towns, villages, and country, within the jurisdiction of Concepcion, form different bodies of militia, some of which are in pay, and all must be ready on any sudden alarm, there is, besides the corregidor, a Maestra de Campo, who commands in all the military affairs without the city; but we shall have occasion to give a farther account of his duty in the sequel.

THIS city at first belonged to the diocess of Imperial; but that being ruined by the perpetual incursions of the Indians, the episcopal see was removed to Concepcion, and the chapter changed. It is now a suffragan of Lima, and has a chapter consisting of a bishop, dean, archdeacon, and two prebendaries.

THE jurisdiction of Concepcion extends from the river Maule on the coast N. of the city to Cape Lavapies. It has few villages; but the whole country full of seats, farms, and cottages.

THE inhabitants consist of Spaniards and Mestizos, who in colour are hardly distinguishable from the former; both being very fair, and some have even fresh complexions. The goodness of the climate, together with the fertility of the country, have drawn hither many Spanish families, both Creoles and Europeans, who live together in that harmony and friendship, which should be an example to the other parts of these provinces; where the comforts of society are greatly lessened by the feuds arising from a mean pride and jealousy. The men in general are well-shaped and robust, and the women handsome. Their customs and dress, are a kind of compound of those of Lima and Quito, but more nearly resemble the latter, except that the men use, instead of a cloak, a poncho, which is made in the form of a quilt, about two yards and a half or three in length, and two in breadth, having an opening in the middle just sufficient to put their head through, the rest hanging down on all sides.

sides. (Plate VII.) This is their dress in all weathers, whether walking or riding. The peasants, whom they call Guafos, never pull it off but when they go to rest, tucking it up in such a manner, that both their arms and whole body are at full liberty either for labour or diversion. This is an universal garb among all ranks when they ride on horseback, an exercise very common here; and the women are particularly famous for their skill in horsemanship.

THIS dress though so plain and uniform in itself, serves to distinguish the rank and quality of the wearer; as its price is proportional to the work on it. Some wear it as a covering, some for decency, and others for shew. Accordingly if those of the common people cost only four or five dollars, others have stood the owners in a hundred and fifty or two hundred. This difference arises from the fineness of the stuff, or from the laces and embroidery, with which they are decorated. They are of a double woollen stuff manufactured by the Indians, and generally of a blue colour embroidered with red or white; sometimes, indeed, the ground is white embroidered with blue, red, and other colours.

THE peasants are surprizingly dextrous in managing the noose and lance; and it is very seldom, that tho' on full speed they miss their aim with the former. Accordingly these are their chief arms, and they will halter a wild bull with the same agility as any other creature; nor could a man, however cautious, avoid being taken in their noose. I shall relate an instance of their address with regard to an Englishman whom we knew at Lima. He was in the long boat of a privateer then lying in Conception bay, intending to land at Talcaguano, with a view of plundering the neighbouring villages; but a body of the country militia made to the shore in order to oppose them. Upon this the English fired upon them with their musquetry, imagining
that

that would be sufficient to put them to flight, and thus the place be open for them to land. They had no sooner discharged their pieces, than one of the peasants, tho' the boat was at a considerable distance, threw his noose, and notwithstanding all in the boat threw themselves on their faces, he noosed the above-mentioned person, pulling him out of the boat with the greatest rapidity; whilst the others, instead of endeavouring to save him, in their fright thought of nothing but how to get out of danger as soon as possible. It was the Englishman's good fortune not to be strangled or killed by the bruises he received, the slip knot having passed from one shoulder under the opposite arm, so that he recovered in a few days.

As it is very seldom that they miss, and are obliged on haltering a creature, to draw the knot, at the same time that they throw the noose, they clap spurs to their horse, and put him on his full speed; that the creature is so far from having time to disengage itself, that it is no sooner caught than disabled. This is also one of the weapons, if I may give it that name, used in their private quarrels, defending themselves with a lance of a middling length. And their address on these occasions is so very remarkable, that very often after a long dispute in which both parties are heartily tired, they part with no other hurt than a few bruises. This is also the method they take to satisfy their revenge, endeavouring to halter the object of their hatred, either as he runs from them, or is not apprized of their intention. In this case the only resource in an open country on seeing him with his noose in his hand, is, to throw one's self on the ground, keeping the legs and arms as close to the surface as possible, that the rope may have no room to get under any part. The person may also save himself by standing close to a tree, and if in the street by placing himself against the wall. A small distance, that

is, under ten or fifteen paces, partly renders their dexterity ineffectual; but there is very great danger of being intangled when the distance is thirty or forty. The nooses or halters, are thongs of a cow's hide cut round the skin, and of a proper breadth. These thongs they twist, and work with fat, till they are of a proper degree of suppleness; but so strong, that tho' when twisted they are not larger than the little finger, yet they hold the wildest bull, when its efforts to escape would break a rope of hemp of much larger dimensions.

THE climate of this city is not essentially different from that of the greatest part of Europe. Winter is indeed something colder than in the southern provinces of Spain, but milder than those of the northern; and the summer heats proportionably. In winter the inhabitants seem to be little incommoded by the N. winds, and in summer the heats are moderated by the cooling breezes from the S. The heat is however greater in the city than in the adjacent country, occasioned chiefly by the different disposition of the ground, being intersected by various rivers, some of which are very large, as the Arauco and the Biobio. The latter of which, at a league above its mouth, is very near four leagues in breadth. It may however in summer be forded, but not without danger; in the winter it is passed in balzas. At the southern banks of the river the territories of the wild Indians begin, and near the same shore towards that part are the chain of frontier forts, of which a farther account will be given in the sequel. The country of this jurisdiction consists principally of extensive plains, the Cordillera being at a considerable distance to the eastward, and the whole space between it and the sea coast, one entire and uniform plain. interrupted only by a few eminences, which are an ornament to the country, and render the perspective of it the more agreeable.

THE great affinity between this climate and that of Spain is evident from its products, though there is a remarkable difference with regard to their goodness and plenty, in both which this country has greatly the advantage. The trees and plants of all kinds have their regular seasons, embellishing the fields with their verdure, entertaining the sight with their various flowers and blossoms, and gratifying the palate with their delicious fruits. It is needless to mention that the times of the season must be opposite, consequently the winter in Spain is their summer, and the autumn of the former, the spring of the latter. In saying that this country produces the same corn and fruits as Spain, I do not mean those of the most southern parts; for neither sugar canes, oranges nor lemons thrive here. Nor is it well adapted to olive-yards, tho' some olives are produced here. But the fruits cultivated in the center of Spain, are the same with those produced here in a most astonishing plenty, wheat and other grain generally producing a hundred fold. I shall here relate an instance I myself saw and examined at Talcaguano, in a garden near the sea side, at a place called the Morro, very little more than a quarter of a league from the harbour. Among several stalks of wheat that had grown there without culture, I saw one whose stem was not more than a foot from the ground, but from its knots there afterwards sprung so many stalks, as produced thirty four ears*, the largest of which were near three inches in length, and the least not less than two. The master of the house observing that I viewed this production of nature with astonishment, told me that it was nothing extraordinary, for tho' the grain in the ground commonly sown, did not often attain such a luxuriancy, it was com-

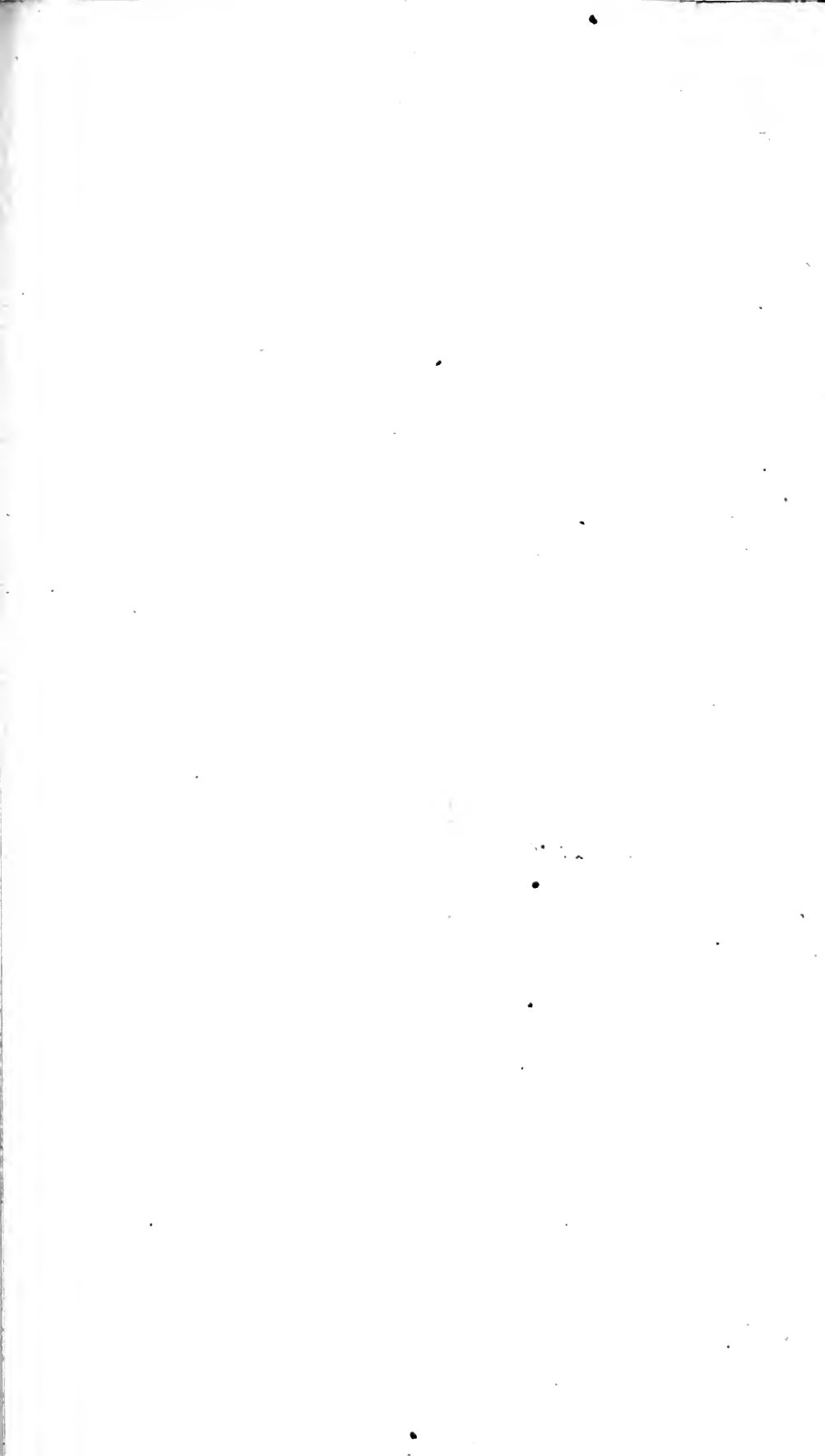
* This species of wheat is called *Triticum spica multiplici*, and is cultivated in Italy and Sicily.

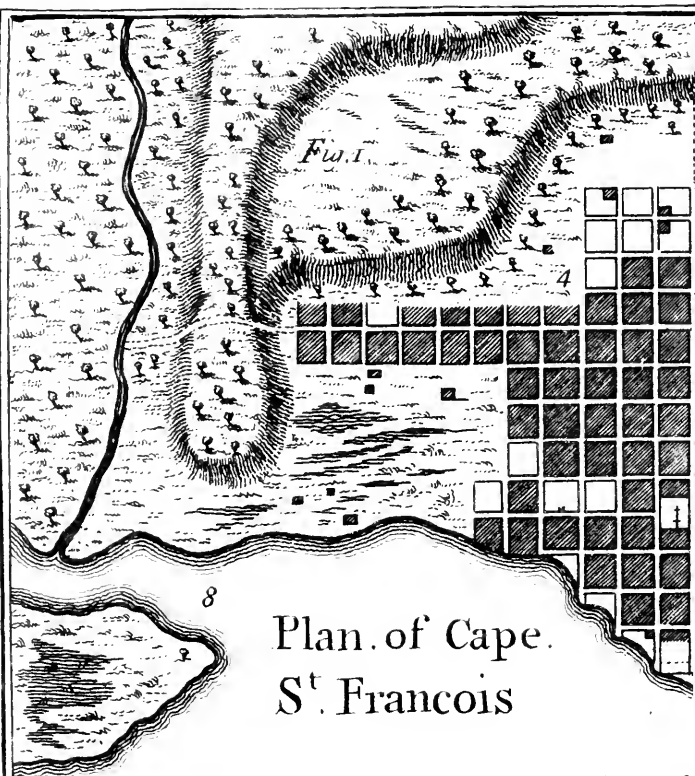
mon for each stalk to produce five or six ears. This information raised my curiosity; and I met with so many instances afterwards, that my surprize at seeing the stalk just mentioned was greatly abated; as from the moisture, advantageous exposure, and richness of the soil, a much greater produce might naturally be expected than in the ground constantly sown.

THE great plenty of wheat here is sufficiently indicated by its price; a measure weighing six arobas and six pounds, being usually sold for eight or ten reals. Yet for want of a market, tho' at so low a price, no more is sown than is necessary for home consumption; and thence great part of the country lies fallow.

Here are vines of several kinds, and which vye with the wheat in exuberance. They are also, both with regard to the richness and flavour of their grapes, esteemed beyond any produced in Peru. Most of them are red. A sort of Muscadel is also made here, whose flavour far exceeds any of the kind made in Spain. The grapes grow mostly in espaliers, and not on detached vines. In this respect also, as in the wheat, large tracts of ground are totally neglected. For tho' its produce is so considerable, the buyers are so few, that the vineyards do not answer even the expence of cultivation.

THE chief use made of these rich lands by the owners is, the fattening of oxen, goats and sheep. And this is the principal employment of greatest part of the inhabitants of the country of all ranks, and universally of the lower class. As soon as the horned cattle are fattened in these luxuriant pastures, and the proper season arrived, four or five hundred, and even more, according to the largeness of the farm, are slaughtered. They take out the fat, melt it into a kind of lard, there called *Grassa*; and buccaneer or dry the flesh in smoke; but the greatest profit





See Expln. of

Fig. 2. Men of Chili Pag. 235.



fit arises from the hide, the tallow, and the grassa, a sufficient proof of their prodigious fatness when killed. But an idea of the fertility of this country may be best formed from the value of a live beast, which, when fit to be killed, may be purchased for four dollars; a price vastly beneath that in any other part of India; and may be sufficient to remove the unjust reproach of the poverty of this province. For were the industry of the people equal to the fertility of the soil, this kingdom would be the most opulent of any in America.

THE manner of slaughtering the beasts render it a favourable diversion to the persons employed in performing it, and it must be owned that their dexterity is really surprizing. The cattle intended to be killed are drove into an inclosure. At the gate are the Guafos on horseback with their spears two or three toises in length, and at one end a very sharp piece of steel in the form of a half moon, the points of which are about a foot distant from each other. Every thing being ready, the gate of the inclosure is opened, and a beast turned out, which naturally betakes itself to flight, but is immediately pursued by a Guaso, who without checking his horse hamstringing it in one leg, and then immediately in the other. He then alights, and having dispatched his capture, skins it, takes out the tallow, the fat for the Grassa, and cuts up the flesh for salting and drying. This done he wraps up the tallow in the hide, and loading it on his horse, carries it to the farm; returning again for the flesh. After this he sets out on another expedition. Sometimes they turn out at once as many beasts as there are Guafos ready to kill them. And this is the daily exercise till all the cattle appointed for that year's slaughter are dispatched. An European is surprized not only at their dexterity in hamstringing the beast, when both are on full speed, but also to see one man

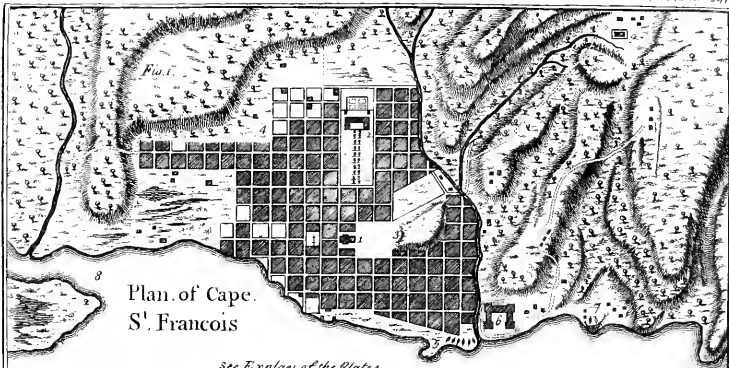


Fig. 2. Men of Chili Pag. 233.



Fig. 3. Manner of Killing the Beasts in Chili.



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alone go through the whole work in such a regular method and great dispatch. If the beast be swifter than his horse, the Guaso has recourse to his noose, and halts him by throwing it either about his neck, or round one or two of his legs, according as opportunity offers, and by that means secures him. Then if a tree be near at hand he gives the end of the thong two or three turns round the trunk, and the whole difficulty of killing the beast is over.

THE tallow is wrapt up in the hides, and in this manner carried to the city for sale; the Graffa is melted into bags of sheep-skins; the flesh, after being cut into thin slices, is salted, and this is what they call Tassagear; afterwards it is buccaneered or dried in the smoke, and sold. The hides they tan, and make from them a most excellent leather, especially for the soles of shoes. Goats also as we have already observed, are fattened and turn to good account. Their tallow nearly resembles that of the ox, and the Cordovan leather made of their skins surpasses every thing of that kind made in any part of the whole kingdom of Peru.

ALL other provisions and grain are in the same plenty, turkeys, geese, and all kinds of poultry are sold at a remarkable low price, great numbers of them being bred all over the country, with little care and no expence. Wild fowls also are very common, among which are canelones, and others described among the birds found in the desarts of Quito, tho' these are not so large, and more like the bandarrias as they are there called. Here are also wood pigeons, turtle doves, partridges, snipes, woodcocks, and royal cirapicos, &c. And with regard to these the air may be said to vie with the fertility of the earth.

AMONG the birds I must not omit one of a very singular kind, and found all over the country. The natives call these birds *dispertadores*, awakeners, from their

their giving notice to others of the approach of any danger. On hearing the noise of the approach of any creature whether man or beast, or seeing them within a small distance, they rise from the ground, and make a loud chattering not unlike that of a magpye; continuing the noise, and flying about in the air over the object which caused the alarm. This is understood by the birds thereabouts, who immediately rise and by that means escape the danger.

THIS bird is about the size of a middling fowl, its plumage black and white, has a thick neck, the head something large, erect, and beautifully adorned with a tuft of feathers; its eyes are large, sharp and lively; its bill well proportioned, strong, and a little curved. On the fore part of their wings are two spurs, about an inch in length, of a reddish tinct towards the root, and their points resembling those of a cock, being very hard and sharp. These are the weapons they make use of against the other birds, particularly those of prey as hawks, and others of that kind, which probably abound the more in this country, from the great variety of prey it affords them.

AMONG the singing birds is the goldfinch, in every particular resembling those of Spain, except a small variation in its plumage. There are besides others proper to this country, and met with in all the cold climates, particularly the piches, which are something larger than sparrows. They are of a brown colour, spotted with black, except their breast, which is of a most beautiful red, and some feathers of the same colour in their wings, intermixed with others of a bright yellow. Amidst all the fertility of this country, the only insects are the niguas or piques; and tho' some snakes are found in the fields and woods, their bite is not dangerous. Neither are the country peasants under any apprehensions from ravenous beasts; so that nature may be said to pour her treasures on this country, without blending them with the usual inconveniences.

THE fruits which mostly abound in Chili, are of the same kind as those known in Europe; its cherries in particular are large, and of a fine taste. The strawberries are of two kinds, one called frutillas, and are larger than those of Quito, wanting little of being equal to a hen's egg in magnitude. The other, which in size, colour and taste, perfectly resemble those of Spain, grow wild, on the side of the eminences with which the plains are interspersed. And here also grow all kind of flowers, without any other culture, than that of benign nature.

AMONG the remarkable herbs, of which many are medicinal, and others applied to divers uses, is the panque, of great service in tanning leather. It abounds every where, and grows to about four or five feet from the ground. The principal stem, which is of a soft substance, is betwixt four and five inches in diameter, and about two feet and a half in height, separating there into several branches, bearing round, serrated, rough, and thick leaves, and so large that their diameter when full grown, is seldom less than a foot and a half, and sometimes two feet. Before the plant is fit to be cut, when the leaves begin to turn red, the peasants make an incision into the bark, and suck the juice which is very cooling and astringent; but as soon as ever the leaf is observed to turn white, an indication of decay, they cut the plant down at the root, take off the branches, and divide the stalk into short pieces, which being dried in the sun, make an excellent tan.

BESIDES this rich variety of productions, on the surface of the earth, the country also abounds with valuable mines and quarries; particularly of Lapis lazuli and loadstone, copper equal to the best of Europe; besides several of gold; but no advantage is derived from any; the inhabitants, contented with the plentiful enjoyment of all the necessaries of life, extend their wishes no farther, leaving to the curiosity
and

and avarice of others the laborious search after what the earth contains in its bowels.

THIS kingdom of Chili seems also to have been the first country of those famous horses and mules, mentioned in the first volume. Indeed all these creatures found in America, owe their origin to some imported from Spain. At present, however, those of Chili surpass not only those of the other parts of America, but even those of Spain, from whence they are derived. The horses first brought over might possibly have been of the running kind, Spain still abounding in that sort. But it must be owned, that greater care has been taken here of preventing the breed from being mixed with others of a less generous species; and by this means they greatly exceed those of Spain; for without any other incentive than their own inclination, before they will suffer any other to get before them, they will exert their utmost strength; and at the same time their motion is so easy, that the rider is not the least fatigued. In beauty and gracefulness they are not inferior to the famous Andalusian horses, and at the same time full of spirit. Accordingly they are every where so highly valued, that a more acceptable present cannot be made to a person of the greatest distinction, than one of these beasts. Many purchase them for parade, and besides their being common all over the kingdom, they have been sent even to Quito. The great demand for them, and consequently their high price, has induced the inhabitants of several countries to attempt the breeding of them; but none are equal to those of Chili.

THE commerce at Conception might be considerably increased, were the country, which is far from being the case, inhabited in any proportion to its fertility and extent; but for want of a sufficient number of hands, their commerce is at a very low ebb, consisting almost intirely in provisions, wine, &c. and this is so small, that it is chiefly carried on

by only a single ship coming once a year from Calloa to load with them, together with a few others trading to Chiloe or Baldivia, and in their return touch here. Their exports are tallow, grassa, cordovan, bend leather, excellent butter, wines, and dried fruits. The goods brought hither in exchange are the several sorts of woollen stuffs from Quito, and others from Europe, iron, and mercury. Very few European goods are however imported; for the people here not being remarkable for their riches, use only home made stuffs and bays, which tho' extremely good are in no great quantity. The commerce carried on between the inhabitants of Chili, and the Arauco Indians, shall be mentioned in its proper place.

CHAP. VI.

Description of CONCEPTION BAY; its roads or harbours, fish, &c. and the singular mines of shells in its neighbourhood.

THE bay of Conception, besides its excellent bottom, is of such an extent, as not to be equalled by any on the whole coast. For from Tierra-Firma, north and south, its length is nearly three leagues and a half, and its breadth from east to west, almost three leagues, being the distance betwixt the harbour of Talcaguano, and the Cirillo virde, or little green mountain, situated near the city; from whence its breadth is contracted by the island of Quiriquina, which lying in the mouth of it, forms two entrances, of which that on the east side is the safest, being two miles in breadth, and accordingly frequented by most ships. The west entrance is between the island and Talcaguano point, and

and is near half a league in breadth. In the principal entrance of this bay is thirty fathom water, which depth afterwards decreases to eleven and ten, till within about a mile of the shore, opposite to the entrance. The western, tho' the many rocks and breakers in it make it appear very dangerous, has a channel with water sufficient for the largest ship, the depth being at first thirty fathom, and never less than eleven; it is situated in the middle of the entrance, that is at an equal distance between the rocks which project about a quarter of a league from Talcaguano point, and Quiriquina.

WITHIN the bay are three roads or harbours, where ships anchor; for tho' the bottom be every where clear, it is only in one of these three places ships can ride in safety, being no where else sheltered from the wind. The first called Puerto Tome, lies E. and W. with the N. point of Quiriquina, contiguous to the coast of Tierra Firme. The anchoring place is about half a league distant from the land, in about twelve fathom water. But this road is only used when ships come in during the night, it being difficult to reach either of the other two before day light, as several tacks must be made for that purpose.

IN this bay the principal port is that of Talcaguana. It is properly an elbow, and bears S. S. W. from the S. point of Quiriquina. This is by far the most frequented, ships in general anchoring here, having not only better ground than any other part of the bay, but are in some measure sheltered from the N. winds. Whereas at Cirillo-verde, they lie exposed, not only to these, but also to the S. winds, the land which should intercept them being low. Besides the bottom is of a loose mud, so that the anchors in a hard gale of wind, generally come home; and consequently the ships in great danger of being stranded on the coast. From these inconveniences it may be concluded, that the only ships which anchor

here, are such as happen to be in those parts in the midst of summer, and are in haste to take in their loading, for which this road is most convenient, as being nearest the city.

Two rivers empty themselves into this bay, one of which passing thro' the city of Concepcion, has thence the same name; the other is called St. Pedro. The first is the watering place for ships anchoring at Cirillo Verde; whereas those at Talcaguano, supply themselves with that necessary fluid from some streams which flow from the adjacent eminences; they easily take on board a sufficient quantity of wood, of which there is here plenty; as of all other necessaries.

SHIPS, before they enter the bay of Concepcion, endeavour to make the island of Santa Maria, and then coast along it, keeping at the same time, a good look out for a reef of rocks which stretches out almost three leagues from the N. W. point; thence they continue their course, keeping at a little distance from the main, there being no rocks but what are above water. After weathering the reef of rocks on the island of Santa Maria, they steer directly for Talcaguano point, at the distance of about half a league; from which seaward, is a rock called Quiebraollas, which must be the more carefully avoided as it is surrounded with shoals. There is, however, no danger, if the ship be not nearer than half a mile; indeed there is a sufficient depth of water within a cable's length. After their being abreast of this rock they steer for the N. point of Quiriquina, off which lie two rocks, but the farthest from the shore is only a quarter of a league, and may be safely approached within a stone's cast. Both these rocks swarm with sea-wolves; and as there is a sufficient depth of water all round them, there is no other danger in standing near them, than what may be seen. There is indeed a necessity for standing near them, to avoid falling to leeward of the bay. After
2
passing

passing them, the course is continued as near as possible to the island of Quiriquina, taking care to avoid some other rocks lying along the shore.

As ships are generally obliged to make several tacks in order to get into Conception bay, care must be taken not to approach too near the island of Quiriquina, either on the E. or S. sides; for tho' the coast is bold on the N. and N. W. sides, there is a shoal on the S. extending to a considerable distance from the shore. At a third part of the distance between the road at Talcaguano, and the point of the same name, is another shoal, running about half a league to the eastward. In the middle of it is a ledge of rocks, whose tops are dry at low water. To avoid this shoal, tho' the thick water sufficiently indicates it, the best way is, at entering the mouth of the bay with a land wind, to steer directly for the middle of a spot of red earth on a mountain of a middling height, situated at the bottom of the bay, continuing this course till the ship is passed the shoal; and then steer directly for the houses at Talcaguana, till within about half a mile from the shore, which is the usual anchoring place in five or six fathom water; Cape Herradura, being covered by the island of Quiriquina. The same care is also necessary to avoid another reef of rocks, lying between the Morro and the coast of Talcaguana; nor must the Morro side be approached too near, there being a sand stretch all along from that reef of rocks to Cirillo Verde. The ships riding at Talcaguana in the manner thus prescribed, are sheltered from the N. wind; but not entirely so from the sea, which in those winds runs very high, and pours in through both entrances. The goodness of the bottom, however, secures the ship. During the force of these winds there is no possibility of landing on account of the great sea; but in fair weather, every place is convenient for going on shore.

THE country round the bay, particularly that
between

between Talcaguana and Concepcion, within four or five leagues from the shore, is noted for a very singular curiosity, namely, that at the depth of half or three quarters of a yard beneath the surface of the ground, is a stratum of shells of different kinds, two or three toises in thickness, and in some places even more, without any intermixture of earth, one large shell being joined together by smaller, and which also fill the cavities of the larger. From these shells all the lime used in building is made; and large pits are dug in the earth for taking out those shells, and calcining them. Were these strata of shells found only in low and level places, this phænomenon would be more easily accounted for by a supposition no ways improbable, namely, that these parts were formerly covered by the sea, agreeable to an observation we made in our description of Lima. But what renders it surprizing is, that the like quarries of the same kind of shells, are found on the tops of mountains in this country, fifty toises above the level of the sea. I did not indeed personally examine the quarries on the highest of those mountains; but was assured of their existence by persons who had lime kilns there; but I saw them myself on the summits of others at the height of twenty toises above the surface of the sea; and was the more pleased with the sight, as it appeared to me a convincing proof of the universality of the deluge. I am not ignorant that some have attributed this to other causes; but an unanswerable confutation of their subterfuge is, that the various sorts of shells which compose these strata both in the plains and mountains, are the very same with those found in the bay and neighbouring places. Among these shells are three species very remarkable: the first is called Choros, already mentioned in our description of Lima; the second is called Pies de Burros, asses feet; and the third Bulgados, and these to me seem to preclude all

manner

manner of doubt that they were originally produced in that sea, from whence they were carried by the waters, and deposited in the places where they are now found.

I HAVE examined these parts with the closest attention, and found no manner of vestige of subterraneous fires. No calcinations are to be met with on the surface of the earth, nor among the shells; which, as I have already observed, are not intermixed with earth; nor are there stones, or any other heterogeneous substances found among them. Some of these shells are entire, others broken; as must naturally happen in such a close compression of them, during so long an interval of time. This circumstance, however trifling it may appear to some, may deserve the consideration of those who have advanced the notion, that shells may be formed in the earth by subterraneous fires, co-operating with the nature of the soil.

THE Pie de Burro, has its name from the fish inclosed in it, resembling, when taken out, the foot of an ass. This fish is of a dark brown colour, firm and filaceous; it is an univalve, its mouth almost circular, and its diameter about three inches. The bottom of the shell is concave within, and convex without. The colour within is perfectly white, the surface very smooth; the outside scabrous and full of tubercles. Its thickness in every part is about four or five lines; and being large, compact, and heavy, is preferred to all others for making lime.

THE bulgados, in the Canaries called bulgaos, are snails, not at all differing in their form from the common; but larger than those of the same name found in gardens, being from two inches, to two inches and a half in diameter. The shell is also very thick, rough on the outside, and of a dark brown colour; and, next to the preceding, makes the best lime.

ALL these species of shell-fish are found at the bottom of the sea in four, six, ten and twelve fathom water.

water. They are caught by drags ; and what is very remarkable is, that no shells, either the same, or that have any resemblance to them, are seen either on the shores continually washed by the sea, or on those tracks which have been overflowed by an extraordinary tide. They adhere to a sea plant, called Cochayuyo, (lake herb) the Indians making no nominal distinctions between the inland lakes, and the sea, calling both cochas. This plant resembles the bejuco; its diameter is about half an inch, and from its root to its extremity of an equal thickness. In length is from twenty to thirty toises, producing at every eighteen inches, or something more, a leaf about a yard and a half or two yards in length ; but the breadth, which is in every part the same, does not exceed two or three inches. It is remarkable smooth, which, together with a viscid liquor, with which it is covered, gives it a very fine gloss. The same may be said of the stem, which is extremely flexible, and strong. Its colour is of a pale green, but that of the leaves more vivid. This plant divides itself into several branches, equal in dimensions to the main stem. These branches successively produce others of the same proportion ; so that the produce of one single root covers a prodigious space. At the joints where the branches spring, are found this kind of shell fish, where they both receive their nourishment, and propagate their species. The extremities of these Cochayuyos, float on the surface, and in some lakes, where the water has remained a long time undisturbed, form a kind of carpet. At the junction of the stalk of every leaf with the stem, is a berry resembling a caper, but something larger, smooth and glossy on the surface, and exactly of the same colour with the stem.

The seas on these coasts abound in excellent fish, tho' not in so great a degree as those near Juan Fernandes. Here are seen, in particular, a great number of whales, which come even into the bay ; also
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tunny-fish, and sea-wolves. Among the amphibious creatures here is one known all along these coasts, and even at Callao. It is called Pajaro Nino, the bird-child. It in some parts resembles a goose, except that its neck and bill are not arched, and is something larger. It has a thick neck, a large head, and a strong short bill. Its legs very small, and in walking the body is in an erect position. Its wings are small, cartilaginous, and nearly resemble the fins of the seal. Its tail is so small as hardly to be distinguished; its wings and whole body are covered with a short brown hair like that of the sea-wolves, and generally full of white spots, tho' some are of other colours. So that upon the whole, the bird makes no disagreeable appearance. It lives promiscuously either in the water or on the land; on the latter it is easily taken, being very slow in its motions; but when attacked, bites severely, tho' it is observed never to be the first aggressor.

C H A P. VII.

Description of the City of SANTIAGO, the Capital of the Kingdom of CHILI.

AFTER giving an account of all the cities and places of note, thro' which we passed, I must not omit the capital of the kingdom of Chili. We had not indeed occasion to visit it personally; but by the informations we received from persons best qualified to answer our inquiries, in the ports of its jurisdiction, to which our affairs called us more than once, we are enabled to gratify the curiosity of a rational reader.

THE city of Santiago, originally called Santiago de la Nuestra Estremadura, was founded by captain Pedro de Valdivia, who began the foundation on the 24th of February 1541, in the valley of Mapocho,
near

near that of Chili, which gives its name to the whole kingdom. It has not been subject to the revolutions of other places, but still stands on its original spot, which is nearly in $33^{\circ} 40'$ south latitude, and about twenty leagues from the harbour of Valparaíso, the nearest port to it in the south seas. Its situation is one of the most convenient and delightful that can be imagined, standing in a delightful plain of twenty-four leagues in extent, watered by a river flowing in meanders thro' the middle of it, and called by the same name of Mapocho. This river runs so near the city, that by means of conduits, the water is conveyed from it thro' the streets, and also supplies the gardens, which few houses here are without, and hence the delightful situation of the place, and the pleasure of the inhabitants are greatly heightened.

THE city is a thousand toises in length from E. to W. and six hundred in breadth from N. to S. On the side opposite the river, which washes the N. part of it, is a large suburb, called Chimba; and on the E. side, almost contiguous to the houses, is a mountain of a middling height, called Santa Lucia. The streets are all of a handsome breadth, paved and streight; some run exactly in an E. and W. direction, and are crossed by others, lying exactly N. and S. Near the middle of the city is the grand piazza, which, like that of Lima, is square, with a very beautiful fountain in the center. On the N. side are the palace of the royal audience, where the presidents have their apartments, the town-house, and the public prison. The W. side is taken up by the cathedral and the bishop's palace. The S. side consists of shops, each decorated with an arch; and the E. is a row of private houses. The other parts of the city are divided into insulated squares of houses, regular, and of the same dimensions with those of Lima.

THE houses here are built of adoves, or unburnt bricks, and very low; this necessary caution against the

the terrible devastation of earthquakes being equally necessary here as in all other towns of Peru, calamities with which this city has been often visited; but the most remarkable are the following.

1. IN the year 1570, an earthquake happened, which overflowed several mountains in this kingdom; many villages were entirely destroyed, and great part of the inhabitants buried in their ruins.

2. IN the year 1647, on the 13th of May, many of the houses and churches of this city were ruined by another shock.

3. IN 1657, on the 15th of March, the earth was observed to have a tremulous motion for the space of a quarter of an hour, and few of the buildings in the city were left standing.

4. IN 1722, on the 24th of May, great part of the houses were damaged by another earthquake.

5. IN the year 1730, on the 8th of July, happened that tremendous earthquake already mentioned in our account of Concepcion. This shock not only ruined the greatest part of the city, but concussions were often felt for many months afterwards; and this catastrophe was succeeded by an epidemical distemper, which swept away even greater numbers than had before perished by the earthquake.

NOTWITHSTANDING the houses are low, they make a handsome appearance, and are well contrived both for pleasure and convenience.

BESIDES the cathedral and the parish church of the Sagrario, here are two others, namely, that of St. Anne, and St. Isidoro. There are also three convents of St. Francisco, San Diego, a college for students, and, without the city, a convent of recolects; two of Augustines, one of Dominicans, one of the fathers of mercy, one of St. Juan de Dios, and five colleges of Jesuits, namely, St. Michael, the Noviciate, St. Paul, St. Xavier, a college for students, who wear a brown cloak, and a red scarf, and the college, called La Olleria,

Olleria, for the exercises of St. Ignatius. Here are also four nunneries, two of St. Clare, two of Augustines, and one of Carmelites, and a religious sisterhood, under the rules of St. Augustine. All which have a large number of recluses, as is common in all the cities of Peru. The churches of the convents, besides being very spacious, are built either of brick or stone, and those of the Jesuits are distinguished by the beauty of their architecture. The parish churches are in every respect greatly inferior to them.

THE inhabitants of Santiago are computed at about four thousand families, and of these nearly one half are Spaniards of all degrees; and among them some very eminent both for rank and opulence. The other moiety consists of Casts and Indians, but chiefly of the latter.

THE customs here differ very little from those already mentioned in our account of large cities. They are not so negligent in their care of their apparel as at Conception; and instead of the ostentation of Lima, they follow the modest decency of Quito. The men, except on some particular ceremonies, generally wear ponchos, and all the families who can any way afford it, keep a calash for driving about the city. The men are robust, of a proper stature, well-shaped, and of a good air. The women have all the charms of those of Peru, and are rather more remarkable for the delicacy of their features, and the fineness of their complexions; but they disfigure their natural beauty by a misplaced art, painting themselves in such a preposterous manner, as not only to spoil the natural delicacy of their skin, but even their teeth; so that it is very rare to see a woman here of any age with a good set.

IN this city is a royal audience, removed hither from Conception. It consists of a president, four auditors, and a fiscal, together with another officer dignified with the indearing title of patron of the Indians.

Indians. The determinations of this court are without appeal except to the supreme council of the Indies, and this only in matters of notorious injustice, or denial of redress.

THE president, tho' in some particulars subordinate to the vice-roy of Lima, is also governor and captain general of the whole kingdom of Chili; and, as such, he is to reside one half of the year at Concepcion, and the other at Santiago. During his absence from the last city, the corregidor acts as his representative; and his jurisdiction, on this occasion, extends to all the other towns, except the military governments.

THE magistracy, at the head of which is the corregidor, consists of regidores, and two ordinary alcaldes. In these are lodged the police, and civil government of the city; and during the time the president resides here, the jurisdiction of the corregidor is limited to the liberties of Santiago.

THE office for the royal revenue, is directed by an accountant and treasurer; where are paid the tributes of the Indians, and other parts of the revenue; the salaries of officers within its department, and other assignments.

THE chapter of the cathedral consists of the bishop, dean, archdeacon, chantor, four canons; and other subordinate ecclesiastics.

HERE is also a tribunal of Croisade, the members of which are a subdelegate commissary, an accountant and treasurer. Likewise a commission of inquisition, all the officers of which are appointed by the tribunal of inquisition at Lima.

THE temperature of the air at Santiago is nearly the same with that of Concepcion. The luxuriance of soil, and exuberance of all kinds of provisions, the commerce, and other necessary particulars, I shall mention in the following account of the kingdom of Chili.

CHAP. VIII.

Account of that part of CHILI within the jurisdiction of the audience of SANTIAGO.

THE kingdom of Chili extends from the frontiers of Peru to the streights of Magellan, the distance being five hundred and thirty leagues. These two kingdoms, as I have mentioned in another place, are separated by the desert of Atacamo, which extends eighty leagues between the province of the same name, being the last of Peru, and the valley of Copoyapu, now corruptly called Copiapo, the first in Chili, and in every particular resembles the desert of Sektura. Eastward, some parts of this kingdom terminates on the frontiers of Paraguay, tho' some uninhabited deserts intervene; and others border on the government of Buenos Ayres. Tho' between these are the Pampas or extensive and level plains. Its western boundary is the south-sea, extending from 27 deg. nearly, the latitude of Copiapo, to $53^{\circ} 30'$ S. But to confine ourselves to the true extent of this kingdom, as inhabited by the Spaniards, it begins at Copiapo, and terminates at the large island of Chiloe, the southern extremity of which is in 34° of S. latitude; and its extent from W. to E. is the distance between the Cordillera, which is here of a stupendous height, and the coast of the south-sea; that is, about thirty leagues.

PART of the country which at present composes the kingdom of Chili, was subjected to the empire of the Yncas by Yupanqui, the tenth emperor; who, incited by the enchanting account given of these provinces, undertook the conquest of them; and prosecuted the enterprize with such success, that he subdued the several nations inhabiting the valleys of Copoyapu or Copiapo, Coquimpu, or Coquimbo, and Chili.

Chili. But in his intended career southward, the victorious Ynca met with an unsurmountable difficulty from the Purumauco Indians, and other nations, whom the rapidity of his conquests had induced to oppose him by a general confederacy. Thus he found himself under a necessity of desisting, after having carried his arms as far as the river Mauli, which is in the latitude of $34^{\circ} 30'$.

AFTER the Spaniards had undertaken a descent in Peru, and made themselves masters of its several provinces, the marshal Don Diego de Almagro, was commissioned for the conquest of Chili. Accordingly he marched from Cusco at the beginning of the year 1535, and after losing the greatest part of his Indians, and a considerable number of Spaniards, who perished with cold in passing over the cordillera nevada, he arrived at Copiapo, where the Indians, without trying the chance of war, submitted. Animated with such unexpected pusillanimity, he proceeded to the conquest of other nations; even such as never had acknowledged the Yncas. And tho' he here met with a more warlike people, who were determined to sell their liberty dear, he carried on the war prosperously. But his majesty, in consideration of his great services, performed with so much hazard, having conferred on him the government of a territory a hundred leagues in length, south of that which belonged to the marquis Don Francisco Pizarro, a difference arose between these two great men, with regard to the boundaries of their respective governments. Almagro, impatient to take possession, and pretending that the city of Cusco ought to be included in his government, the conquest was suspended, and he himself hastened to that city, where instead of being invested with the chief command, he fell a sacrifice to the jealousy of Hernando Pizarro, who endeavoured to conceal

his irregular proceedings under the veil of justice.

In the year 1541, the conquest of Chili was again set on foot, and the marquis Pizarro conferred the command on Pedro de Valdivia, together with the title of general. Accordingly he marched into the country, and founded most of the principal towns, and villages in it. So that in the year 1548, he was promoted to the government of it, by the president of Peru. In the prosecution of the conquest of these provinces, he had many sharp skirmishes with the natives, till at last, in the year 1553, bravely opposing a general revolt, with a very inferior force, he fell fighting with the greatest intrepidity at the head of his troops, the greatest part of whom, enraged at losing so brave a man, chose to perish with him rather than save themselves by flight. His name, besides the figure it makes in history, is still preserved in this country in the town of Valdivia, which he founded.

THE martial genius of the Indians of this kingdom, considerably retarded the reduction of it; and has always been the chief cause why the Spanish settlements here, are so little proportional to the extent, fertility and riches of the country. Accordingly the captain-generalship of this vast kingdom has only four particular governments, and eleven jurisdictions; which are the following.

Particular governments in the kingdom of Chili.

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| I. The major-generalship | III. Valdivia. |
| of the kingdom of Chili. | IV. Chiloe. |
| II. Valparaíso. | |

Jurisdictions in the kingdom of Chili.

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|-----------------|-----------------|
| I. Santiago. | V. Aconcagua. |
| II. Rancagua, | VI. Melipilla. |
| III. Colchagua. | VII. Quillota. |
| IV. Chillan. | VIII. Coquimbo. |

IX. Copiapo,

IX Copiapo, & Guasco. X. Mendoza.

XI. La Concepcion.

I. To the majorgeneralship of the kingdom of Chili, belongs the military government of the frontier towns and fortresses. These are Arauco, the stated residence of the general, Santajuana, Puren, Los Angeles, Tucapel, and Yumbel. It will be here necessary to observe, that not above five leagues south of Concepcion bay, the sea receives a river called Biobio, both the south banks and head of which are inhabited by wild Indians: and to prevent their incursions, strong forts have been erected along the banks, and are always well garrisoned and furnished with all kinds of military stores. Among these on the south banks of the river is the fort of Arauco, and the others at a proper distance eastward to the mountain of Tucapel. Thus all attempts from these Indians is precluded, and the Spanish settlements protected from their depredations. The general is obliged to visit these forts from time to time, carefully inspecting into their condition, and, in case of necessity, to hasten to their relief. During his absence, the commanding officer of each is the captain of the garrison, which usually consisting both of horse and foot with their officers, the person on whom the command devolves is previously nominated. This important post is in the disposal of the president, as supposed to be best acquainted with the merits of the several competitors when a vacancy happens; and that the safety of his government will induce him to prefer the most deserving. Accordingly whoever intends to offer himself a candidate for this post, should solicit to be employed in the frontier service, procure a competent knowledge of the stratagems of the Indians, and be very attentive to distinguish himself on any alarm, or encounter. It is indeed expressed in the royal commission, that the corregidor of Con-

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cepcion,

ception, shall be the military commander in chief; and, consequently, it is to him that the appointment of the general properly belongs; but this, from very powerful reasons, is dispensed with, the proper discharge of these two posts, being utterly incompatible; and the civil and military requisite here very rarely meeting in the same person. But when this obstacle does not exist, and the corregidor is one of these extraordinary persons, the president, agreeable to the royal expression, confers the post of *Maestre de campo* on the corregidor of *la Concepcion*.

II. *VALPARAISO* is the second military government. But the particular account of it, I shall reserve for a more proper place.

III. *VALDIVIA* has a military governor nominated by the king. Here is also a good body of troops, both for garrisoning the place, and the forts built to defend the entrance of the river and harbours in it. Close to the river stands the town, the inhabitants of which are chiefly whites or *Mestizos*; but a village forming a kind of suburb is inhabited by friendly Indians. This government has undergone some vicissitudes in point of subordination, being sometimes independent of the presidents of *Chili*, and immediately subject to the vice-roy of *Lima*; and at other times a part of the former. At last, on weighing the difficulties for providing for any sudden exigence, or having a watchful eye over its necessary concerns at so great a distance as *Lima*, it was annexed to the jurisdiction of the president of *Chili*, as being nearer at hand to see that the forces are always on a good footing, and constantly in a proper posture of defence.

IV. *CHILOE* has a military governor, who resides at *Chacao*, the principal harbour of the island, being well fortified and capable of making a good defence. Besides *Chacas*, which has the title of a city, is another place much larger, called *Calbuco*, where

where resides a corregidor, who is nominated by the president of Chili. It has also regidores and alcaldes chosen annually. Besides the parish church here is a convent of Franciscans, another of the fathers of mercy, and a college of Jesuits. The island is every where well peopled with Spaniards, Mestizos, and christian Indians.

THE kingdom of Chili has continually a body of regular troops, consisting of five hundred men, for garrisoning Valparaíso, a fort at Concepcion, and those on the frontiers. One half of this body is infantry and the other cavalry. Under the major general who commands in chief is a serjeant major, whose duty it is to render them expert in all the various parts of military exercise; and that he may more conveniently render them ready at their several evolutions, he resides at the fort of Jumbal, which lies in the center of the others. To these also belong a commissary general of the horse, whose post is at Arauco, and in the absence of the general has the command. These troops have also a muster-master general, who resides at Concepcion. The standing forces of Chili, till the beginning of this century, consisted of two thousand men; but the great charge of supporting such a body of troops, occasioned them to be reduced to the present number.

THE produce of the revenue offices at Santiago and Concepcion, not being sufficient to defray the expences of even this small body, a remittance of 100,000 dollars, is every year sent from Lima, half in specie, and half in cloaths, and other goods. But six or eight thousand is annually deducted out of this sum for repairing the forts of the frontiers, and making presents to the deputies of the Indians who attend at conferences, or to satisfy those who complain to the president of injuries received.

VALDIVIA also receives from the treasury of Lima, an annual supply of 70,000 dollars, 30,000

in specie, the value of thirty thousand in clothes for the soldiers, and 10,000 in specie, which is paid to the king's officers at Santiago, in order to purchase flour, charqui, grassa, and other necessaries for the garrison at Valdivia. These remittances are conveyed in ships which sail from Valparaíso.

I. THE jurisdiction of Santiago we have already observed to be limited to its boundaries.

II. RANCAGUA is a jurisdiction in the country, and owes its name from the inhabitants living in single houses, without the appearance of a village, every family in their lonely cottage four, six or more leagues from each other. It is not, however, without a kind of capital, consisting of about fifty houses, and between fifty and sixty families, most of them Mestizos, tho' their casts is not at all perceivable by their complection. The whole jurisdiction may contain about a thousand families, Spaniards, Mestizos, and Indians.

III. COLCHAGUA resembles in every circumstance the former, except its being better peopled; its inhabitants according to the best computations, amounting to fifteen hundred families.

IV. CHILLAN is a small place, but has the title of city, the number of families, by an accurate calculation not exceeding two or three hundred, and having few Spaniards among them.

V. ACONCAGUA is a very small place at the foot of the mountains, but the country is interspersed with a great number of single houses. The valley of the same name is so delightful, that a town called Phelipe le Real, was built in it in 1741.

VI. MELIPILLA made no better figure than the foregoing jurisdictions, till the year 1742, when a town was erected in it by the name of St. Joseph de Longronno.

VII. QUILLOTA. The town of this name does not contain

contain above a hundred families ; but those scattered over the country exceed a thousand.

VIII. COQUIMBO, or la Serena, according to father Fevillee, stands in $24^{\circ} 54' 10''$ south latitude. This was the second town built in the kingdom of Chili, in 1544, by Pedro de Valdivia, with a view of securing the intercourse between Peru and Chili, for the more convenient supply of what succours might be wanted ; and at the same time, for securing the fidelity of the Indians who lived in that valley. This place is situated in the valley of Cuquimpo, from whence it received its original name ; but Valdivia gave it that of la Serena, from an affection to the province of that name in Spain, and of which he was a native. It stands about a quarter of a league from the coast of the south-sea in a most delightful situation, having an extensive prospect of the sea, the river, and the country, which presents the sight with a charming variety of fields of different kinds of grain, and woods of a lively verdure.

THIS town is of itself large, but not proportionally peopled ; the number of families not amounting to above four or five hundred, consisting of Spaniards, Mestizos, and a few Indians. The streets are strait and of a convenient breadth, some of which lying N. and S. and others intersecting from E. to W. the town consists of squares of buildings, like Santiago, and other places of note in this part of America. The houses are all of mud walls, and covered with leaves ; but none are without a large garden, well planted with fruit trees and esculent vegetables, both those of America and Spain ; for the climate is happily adapted to a variety of both kinds, the heats not being excessive, nor the cold severe ; so that both in the fertility of the earth, and the chearful appearance of the country, the whole year wears an aspect of one perpetual spring. The streets, though regular and convenient as abovementioned, are not entirely formed
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by the houses, parts of the intervals between the several squares being filled up with gardens; and most of them have so charming an appearance, as to atone for the mean aspect of the houses.

BESIDES parish churches, here is a Franciscan, a Dominican, and an Augustine convent; one belonging to the fathers of mercy, another to St. Juan de Dios; and a college of Jesuits. The churches of these religious fraternities are large and decent. The parish church occupies part of one side of the great square; and opposite is the town-house, where the alcaldes and regidores meet, who with the corregidor form the corporation.

ON the N. side of Coquimbo runs the river, after flowing in various meanders thro' the whole valley of the same name; and by canals cut from it, furnishes the town with water, one great use of which is to preserve the beauty of their gardens.

IX. COPIAPO is about twelve leagues from the sea-coast, very irregularly built, but contains between three and four hundred families. The sea-port nearest to it is that known by the same name. There is indeed another port in this jurisdiction; but it lies thirty leagues farther to the S. and consists only of a few huts.

X. MENDOSA. The town of this name is situated on the eastern side of the cordillera, at the distance of about fifty leagues from Santiago. It stands on a plain, and is decorated with gardens in the same manner as Coquimbo, and the place being well supplied with water by means of canals, no care is wanting to keep them in their greatest beauty. The town consists of about an hundred families, half Spaniards or whites, and the other half casts. It has besides a decent parish church, a Franciscan, Dominican and Augustine convent, together with a college of Jesuits. This jurisdiction has also two other towns, that of St. Juan de la Frontera, likewise

wife to the eastward of the cordillera, and about thirty leagues N. of Mendoza, and St. Luis de Loyola, about fifty leagues eastward of Mendoza. The latter however is mean and small, not containing above twenty five houses, and fifty or sixty families, Spanish and casts; tho' many more are scattered up and down the neighbouring country. In such a small place it is something remarkable to see a parish church, a dominican convent, and a college of Jesuits. Here the presidents of Chili are received as governors of it, in their way to Chili from Buenos Ayres, this being the first place in their government on that side. The town of St. Juan de la Frontera is, in every respect equal to Mendoza itself.

XI. THE jurisdiction of Concepcion is the last; but having already given an account of it, I shall proceed to consider the commerce carried on by the kingdom of Chili with Peru, Buenos Ayres, Paraguay, and its own towns; and subjoin an account of that carried on with the wild Indians bordering on it, with the manner of maintaining a harmony with these savage people. In the mean time I shall conclude this chapter with observing, that the corregidores of the whole jurisdiction are nominated by the king, except those of Rancagua, Melepillla, and Quillota, who are appointed by the president of Chili. This is indeed the case of all the others, when a corregidor happens to die, before a person is nominated to succeed him; but the office of these corregidores being only for five years, the prolongation must be by his majesty's express order. The inhabitants are formed into companies of militia, and every one knows the place of arms to which he is to repair on any alarm. Thus to Valparaiso belongs the companies of militia of Santiago, Quillota, Melipilla, Aconcagua, and Rancagua; and these in all amount to between two or three thousand men, and are formed into troops and companies.

nies. Rancagua, when Santiago and Colchagua are threatned, is also to send succours thither; and the same duty lies on Chillan with regard to Concepcion. In these cases notice is conveyed with such dispatch, that they are speedily at their rendezvous, all they have to do, being to mount their horses and repair to their station with the usual pace used in that country, which is always a gallop; and thus the militia of this country may be said to ride post to the parts where danger calls them.

CHAP. IX.

Commerce of CHILI. Methods used to keep up a good Harmony with the wild Indians.

IN my description of the city of Concepcion, I mentioned the enchanting beauties of the neighbouring countries; and the exuberant returns of nature for the husbandman's toil. The like profusion of natural productions is seen all over this kingdom. Its plains, eminences, valleys, in short the whole country to the smallest portion of ground is an object of admiration. Every particle of earth, in this amazing fertility, seems transformed in seed. The country round Santiago, as it is not inferior in pleasantness and fertility to that of Concepcion; so also from the great affinity to the climates, its products are nearly the same. Accordingly some farmers wholly apply themselves to corn, others to fattening of cattle; some confine themselves to the breeding of horses, and others to the culture of vines and fruit trees. The first find their account in plentiful harvests of wheat, barley, and particularly in hemp, which thrives here surprizingly, and surpasses those of the former. The second at their large slaughters, have great quantities of tallow, grassa, charqui, and sole

sole leather tanned. Of the goat skins is made Cordovan leather; some tallow is also procured from those creatures. Wines are made here of several sorts, and tho' not so excellent as those of Concepcion, they are very palatable and of a good body; brandy is also distilled from them. These are the principal articles of the active commerce of this kingdom with Peru, which it supplies with wheat, tallow, and cordage; and by the most careful estimate, the quantity of wheat sent annually from Santiago to Callao, amounts to 140,000 Tanegas, each weighing one hundred and fifty six pounds; about eight thousand quintals of cordage; and between sixteen and twenty thousand quintals of tallow: besides sole leather, nuts, filberts, figs, pears, and apples; Grassa, Charqui, and neat tongues: the three last being no inconsiderable articles.

THE more northern parts of the kingdom, as Coquimbo, produce olives, the oil of which is preferable to that of many parts of Peru; but being a natural commodity of that kingdom, and consequently, not an article of exportation, is consumed at home. The country about Santiago, likewise, produces good olives; but in no great quantity, the genius of the inhabitants having not hitherto led them to make large plantations of those trees.

BESIDES the commerce carried on with Peru in provisions, there is that of metals, this kingdom abounding in mines of all kinds, but principally of gold and copper, which we shall briefly consider.

THE most famous gold mine known in Chili, is called Petorca, and lies in a country E. of Santiago. This gold was formerly highly esteemed, and found in great plenty; but now on account of a whitish tinge, the value of it is considerably diminished. This mine for the length of time it has been worked, is equal to the most celebrated in Peru.

IN the country of Yapel, which is situated in the
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same quarter, but farther to the northward along the cordillera, are also rich gold mines, and the metal twenty-three carats fine. In 1710, in the mountains of Lumpanqui near the cordillera, were discovered mines of gold, silver, copper, lead, tin, and iron, the gold between twenty one and twenty two carats fine; but the working from the hardness of the stone, where, according to the miner's phrase, "the metal arms," was very difficult and laborious. This inconvenience does not however occur in the mountain Illaoin, where the stone is soft, and not less rich in metal, equal in fineness to the former. Besides these there are other gold mines, worked with good success at Tiltit, near Santiago.

BETWIXT Quillota and Valparaíso, in a part called Ligua, is a very rich gold mine, and the metal greatly esteemed. Coquimbo, Capiapo, and Guasco, have also gold mines, and the metal found in the two last, is, by way of pre-eminence, called Oro Capote, being the most valuable of any yet discovered. Another kind of mines of the same metal has also been found in this kingdom; but these were exhausted almost as soon as they were opened. Mines of this kind are very common, as well as another kind called Lavaderos*, most of which are between Valparaíso and Las Pennuelas, and about a league from the former. Some of them are also found at Yapel, on the frontiers of the wild Indians, and near Concepcion. These, together with the others known in this kingdom, yield gold dust. Sometimes indeed lumps of gold of considerable magnitude are found; and the hopes of discovering these animate many to work the mines.

* These Lavaderos are pits dug in the angles of ravins or trenches made by rain, and in which it is imagined there may be gold; and in order to discover the metal, a stream of water is turned through it, and the earth briskly spread, that the gold may be carried down with the current, and deposited in the pits.

ALL the gold thus collected in Chili is bought up in the country, and sent to Lima to be coined, there being no mint in Chili; and by the accounts constantly taken, it amounts one year with another to six hundred thousand dollars; but that clandestinely sent by way of the cordillera is said to be nearly four hundred thousand. Consequently the whole must be at least a million. In the countries of Coquimbo and Guasco mines of all kinds of metals are so very common, that the whole earth seems wholly composed of minerals; and it is here those of copper are worked, and from them all Peru and the kingdom of Chili are furnished with that metal. But though this copper exceeds every thing of the kind hitherto known, the mines are worked with great caution, and no more metal extracted than is sufficient to answer the usual demand; and other mines, though known to be equally rich, are left untouched.

IN exchange for the grain, fruits, provisions, and metals, which Chili sends to Peru, it receives iron, cloth, and linen made at Quito, hats, bays, though not many of the latter, there being manufactures of the same kind in Chili, sugar, cacao, sweetmeats, pickles, tobacco, oil, earthen ware, and all kinds of European goods. A small commerce is also carried on between the kingdom of Chili, Paraguay and Buenos Ayres, of which the latter is the staple. The products of Paraguay, which indeed consist only in its herb and wax, are carried thither, then forwarded to Chili, whence the herb is exported to Peru. Large quantities of tallow are also sent to Mendoza for making of soap. In exchange for these commodities Chili sends to Buenos Ayres linen and woollen stuffs, some of which are imported from Peru, and others manufactured in the country: also Ponchos, sugar, snuff, wine and brandy, the two last the traders chiefly buy at San Juan, as most
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convenient for transportation. During the assiento for negroes, they are usually brought to Chili from the factory at Buenos Ayres, the way of Peru being attended with great inconveniences; as in their journey from Panama, they take an opportunity of concealing themselves among the farm-houses; so that what with the great expence, and the numbers who die during their long rout, by the variety of climates, their purchase must consequently be very high.

THE home commerce of Chili, or that carried on within itself, chiefly consists in the provisions sent to Valdivia to the amount of ten thousand dollars, which as the deducted part of its remittance are sent from Lima to Santiago for that purpose. Valdivia furnishes the rest of the places with cedar. Chiloe purchases from the other parts brandy, wine, honey, sugar, the Paraguay herb, salt and Guinea-pepper; and returns to Valparaíso and Concepcion, several kinds of fine wood, in which the island abounds; also woollen stuffs of the country manufacture, made into ponchos, cloaks, quilts, and the like; together with hams, which from the particular delicacy of the flavour are in great request even in Peru, and dried pilchards, the bay and coast of that island being the only places in the south-sea where the fish are caught.

COQUIMBO sends copper to Valparaíso; for tho' all parts of the Cordillera, towards Santiago and Concepcion, abound in mines of that metal, and particularly a place called Payen, where several were formerly worked, and where masses of fifty or a hundred quintals of pure copper have been found, yet as these mines are now no longer worked, the whole country is under a necessity of receiving their copper from the Coquimbo and Guasco mines; sending thither in exchange cordovan leather and soap, made at Mendoza, from whence it is carried to Santiago, and thence sold to different parts of the kingdom.

HAVING thus considered the trade of Chili in both
part

particulars, I shall next proceed to mention that carried on with the wild Indians, and this consists in selling them hard ware, as bits, spurs, and edge tools ; also toys, and some wine. All this is done by barter ; for though the countries they inhabit are not destitute of gold, the Indians cannot be prevailed upon to open the mines ; so that the returns consist in Ponchos, horned cattle, horses of their own breeding, and Indian children of both sexes, which are sold even by their own parents for such trifles ; and this particular kind of traffick, they call rescatar, ransoming. But no Spaniard of any character will be concerned in such barbarous exchanges, being carried on only by the Guafos, and the meanest class of Spaniards settled in Chili. These boldly venture into the parts inhabited by the Indians, and address themselves to the heads of the several families.

THE Indians of Arauco, and those parts, are not governed by Caciques, or Curacas, like those of Perú, the only subordination known among them being with regard to age, so that the oldest person of the family is respected as its governor. The Spaniard begins his negociation with offering the chief of the family a cup of his wine. After this he displays his wares, that the Indian may make choice of what best pleases him ; mentioning at the same time the return he expects. If they agree, the Spaniard makes him a present of a little wine ; and the Indian chief informs the community that they are at liberty to trade with that Spaniard as his friend. Relying on this protection, the Spaniard goes from hut to hut, recommending himself at first by giving the head of every family a taste of his wine. After this they enter upon business, and the Indian having taken what he wanted, the trader goes away without receiving any equivalent at that time, and visits the other huts, as they lie dispersed all over the country, till he has disposed of his stock. He then returns to the cottage of

the chief, calling on his customers in his way, and acquainting them that he is on his return home. Upon this summons, not one fails of bringing him to the chief's hut, what had been agreed on. Here they take their leave of him, with all the appearance of a sincere friendship, and the chief even orders some Indians to escort him to the frontiers, and assist him in driving the cattle he has received in exchange for his goods.

FORMERLY, and even till the year 1724, these traders carried large quantities of wine, of which, as well as of all other inebriating liquors, the Indians are immoderately fond; but on account of the tumults and wars that arose from the intemperate use of spirituous liquors, this branch of trade has been suppressed, and no more wine allowed to be carried into the Indian territories, than what shall be judged necessary to give the masters of families a cup by way of compliment, and a very small quantity for trading. The happy effects of this prohibition are felt on both sides; the Spaniards live in safety, and the Indians in peace and tranquility. They are very fair dealers, never receding from what has been agreed on, and punctual in their payments. It is indeed surprising that a whole people, who are almost strangers to government, and savage in their manners, should, amidst the uncontrouled gratification of the most enormous vices, have so delicate a sense of justice, as to observe it in the most irreproachable manner in their dealings.

ALL the Indians of Arauco, Tucapel, and others inhabiting the more southern parts of the banks of the river Biobio, and also those who live near the cordillera, have hitherto frustrated all attempts made for reducing them under the Spanish government. For in this boundless country, as it may be called, when strongly pushed, they abandon their huts, and retire into the more distant parts of the kingdom, where
being

being joined by other nations, they return in such numbers, that all resistance would be temerity, and again take possession of their former habitations. Thus Chili has always been exposed to their insults; and if a very few only call for a war against the Spaniards, the flame immediately spreads, and their measures are taken with such secrecy, that the first declaration of it is, the murder of those who happen to be among them, and the ravages of the neighbouring villages. Their first step, when a war is agreed on, is, to give notice to the nations for assembling; and this they call *Correa la Fletcha*, to shoot the dart, the summons being sent from village to village, with the utmost silence and rapidity. In these notices they specify the night when the irruption is to be made, and tho' advice of it is sent to the Indians who reside in the Spanish territories, nothing transpires: nor is there a single instance, among all the Indians that have been taken up on suspicion, that one ever made any discovery. And as no great armaments are necessary in this kind of war, their designs continue impenetrable till the terrible executions withdraw the veil.

THE Indians of the several nations being assembled, a general is chosen, with the title of *Toqui*; and when the night fixed on for executing their designs arrives, the Indians who live among the Spaniards, rise and massacre them. After which they divide themselves into small parties, and destroy the seats, farm-houses and villages, murdering all without the least regard to youth or age. These parties afterwards unite, and in a body attack the larger settlements of the Spaniards, besiege the forts, and commit every kind of hostility; and their vast numbers, rather than any discipline, have enabled them, on several occasions, to carry on their enterprizes with success, notwithstanding all the measures taken by the Spanish governors to prevent them. For tho' multitudes of them fall on these occasions, their army continually receives

larger reinforcements. If at any time the Spaniards gain the superiority, the Indians retire to the distance of several leagues, where after concealing themselves a few days, they suddenly fall on a different part from that where they were encamped, endeavouring to carry the place by a sudden assault, unless the commandant's vigilance has provided against any sudden surprize; when, by the advantage of the Spanish discipline, they are generally repulsed with great slaughter: *de 1.200 indios.*

THESE Indian wars against the Spaniards usually continue some years, being of little detriment to the Indians; for most of their occupations which consist in the culture of a small spot of ground, and weaving ponchos and cloaks for apparel, are carried on by the women. Their huts are built in a day or two, and their food consists of roots, maize, and other grain. War therefore, is no impediment or loss to them; indeed they rather consider it as a desirable occupation, their hours at other times being spent in idleness, or carousals, in which they drink chicha, a liquor common among them, and made from apples.

THE first advances towards a treaty of peace with these Indians are generally made by the Spaniards; and as soon as the proposals are agreed to, a congress is held, at which the governor, major-general of Chili, and the principal officers, the bishop of Concepcion, and other persons of eminence assist. On the part of the Indians the toqui, or generalissimo, and the captains of his army, as representatives of the communities, repair to the congress. The last inroad made by these savage enemies, was in the year 1720, during the government of Don Gabriel Cano, lieutenant general of his majesty's forces, who managed the war against them with such vigour and address; that they were obliged to solicit a peace; and their preliminaries were so submissive, that at a congress held in 1724, the peace was concluded, whereby they were left in possession of all the country south of the river Biobio; and

and the Capitanes de Paz were suppressed. These were Spaniards residing in the villages of the converted Indians, and by their exactions had been the principal cause of the revolt.

BESIDES the congresses held with these Indians, for concluding a treaty of peace, others are held on the arrival of a new president, and the same ceremonies observed in both; so that an account of the one will be sufficient to give a just idea of the other.

ON the holding a congress, the president sends notice to the frontier Indians of the day and place, whither he repairs with the abovementioned persons; and on the part of the Indians, the heads of their several communities; and both, for the greater splendor of the interview, are accompanied by an escort consisting of a certain number previously agreed on. The president and his company lodge in tents, and the Indians incamp at a small distance. The elders or chiefs of the neighbouring nations pay the first visit to the president, who receives them very courteously, drinks their healths in wine, and himself gives them the glass to do the like. This politeness, with which they are highly pleased, is succeeded by a present of knives, scissars, and different sorts of toys, on which they place the greatest value. The treaty of peace is then brought on the carpet, and the manner of observing the several articles is settled: after which they return to their camp, and the president returns the visit, carrying with him a quantity of wine sufficient for a moderate regale.

Now all the chiefs of the other communities, who were not present at the first visit, go in a body to pay their respects to the president. At the rising of the congress, the president makes each a small present of wine, which the Indians liberally return in calves, oxen, horses, and fowls. After these reciprocal tokens of friendship, both parties return to their respective habitations.

IN order to gain more effectually the hearts of these Indians, who, tho' in our esteem wretchedly poor, conceal the most stubborn pride, which can only be softened by compliments and favours, it is a maxim with the presidents to admit to their table those who are apparently of the best dispositions, and during the three or four days of the congress, neglects no means of ingratiating himself with the whole body. On these occasions a kind of fair is held at both camps, great numbers of Spaniards repairing thither with such goods as they know will please the Indians, who also come with their ponchos and cattle. Both parties deal by exchange, and never fail of selling their whole stocks; and of observing in their dealings the most exact candour and regularity, as a specimen in which all future commerce is to be conducted.

Tho' these Indians have shewn such a determined aversion to submitting to the Spanish monarchs, their behaviour has been very different to the missionaries, whom they voluntarily permitted to come among them; and many have even shewed the greatest joy at being baptized. But it is extremely difficult to prevail on them to quit their free manner of living; which being productive of vice and savageness, prepossess the mind against the precepts of the christian religion. Before the war of the year 1723, the missionaries, by their indefatigable zeal, had formed several villages, hoping by that means to induce their converts to practise the doctrines of the christian faith. These villages were called St. Christover, Santo Fè, Santa Juana, St. Pedro, and La Mocha, all of them being under the inspection of the Jesuits. The chaplains also of the forts on the frontiers had an additional salary for instructing a certain number of Indians. But on that general insurrection, their innate savageness returned, all these converts abandoned the missionaries and joined their countrymen. On the re-establishment of the peace, they again solicited the

the missionaries to come among them; and some communities have been since formed; but they are far short of their former promising state, it being very difficult to bring even this small number to embrace a social life.

AMIDST all the sanguinary rage of these Indians in their hostilities against the Spaniards, they generally spare the white women, carrying them to their huts, and using them as their own. And hence it is, that many Indians of those nations have the complexions of the Spaniards born in that country. In time of peace many of them come into the Spanish territories, hiring themselves for a certain time to work at the farm houses, and at the expiration of the term return home, after laying out their wages in the purchase of such goods as are valued in their country. All of them, both men and women, wear the poncho and manta, which they weave of wool, and tho' it cannot properly be called a dress, is abundantly sufficient for decency; whereas the Indians at a greater distance from the Spanish frontiers, as those who inhabit the countries south of Valdivia, and the Chonos, who live on the continent near Chiloe, use no sort of apparel. The Indians of Arauco, Tucapel and other tribes near the river Biobio, take great delight in riding, and their armies have some bodies of horse. Their weapons are large spears, javelins, &c. in the use of which they are very dextrous.

CHAP. X.

Voyage from CONCEPTION to the Island of JUAN FERNANDES; and from thence to VALPARAISO.

THE ships being come to an anchor in the port of Talcahuano, we waited on Don Pedro de Mendinueta, at the city of Concepcion, who informed

us that the commodore Don Joseph Pizarro, together with the land and sea officers, were arrived at Santiago, and that he intended to set out for Valparaiso, in order to hoist his flag on board the *Esperanza*, and take upon him the command of that squadron. On receiving this intelligence, and having no orders to continue at Concepcion, we put to sea on the sixth of February, and steering for the place of our destination, made, on the 20th, the island de *Tierra de Juan Fernandes*, and at half an hour after ten, as we were plying to windward along the coast, and standing towards the island which then bore two leagues west from us, we saw on the top of one of the mountains a bright light, which surprized us the more, as on the following day we saw no traces of any ship's being in the port since we left it. I had a clear view of it from the instant it began, and observed that at first it was very small, and increased, so as to form a flame like that of a flambeau. The full vigour of its light lasted about three or four minutes, when it diminished in the same gradual manner it had increased. It did not appear again all the next night, nor had we during the whole time we were at an anchor in the port, any view of such a phænomenon. We sent some of our people on shore to examine all the mountains, and other parts of the island, and they spent several nights on that and the adjacent mountains, but could not discover the least vestige of any fire. As I knew the island to be absolutely destitute, the sanguine colour of the flame, inclined me to think there might be some volcano; but having never seen any thing of that kind before, nor heard from others that there was ever any eruption, I was far from being tenacious of my opinion. We had indeed all our conjectures; but the difficulty was not cleared up till my fifth and last voyage to this island, when Don Joseph Pizarro, sent some people on shore to take an accurate survey of this place, and the ground was found to be burnt,

full of fissures and hot, which verified my first opinion of a volcano.

ON the 21st after coasting along this island, we continued our course for Valparaiso where our little Squadron came to an anchor on the 24th, and were the more pleased as we found there the president of Santiago, Don Joseph Manso, and our commodore; and in the harbour, besides the Callao fleet, three French ships, called the *Louis Erasme*, *Notre Dame de la Delivrance*, and the *Lys*, which had been freighted by four merchants as register ships; and Valparaiso was the first port they had touched at, for vending their cargoes.

FROM several observations made in this harbour by Don George Juan, in the last voyage of 1744, its latitude appears to be $33^{\circ} 02' 36'' 30'''$ and father Fevillée settled its longitude at $304^{\circ} 11' 45''$ from the meridian of Teneriff. This town was at first very mean, consisting only of a few warehouses built by the inhabitants of Santiago for laying up their goods till shipped off for Callao, the harbour of Valparaiso being the nearest port to that city, from which it is only twenty leagues distant, tho' the natives will have it to be more. The only inhabitants at that time were the few servants left by their respective masters for taking care of the warehouses, and managing their mercantile affairs. But in process of time, the merchants themselves, together with several other families, removed from Santiago, in order to be more conveniently situated for trade; since which it has gradually increased, so that at present it is both large and populous; and would be still larger were it not for its inconvenient situation, standing so near the foot of a mountain, that a great part of the houses are built on its acclivity, or in its breaches. The broadest and most convenient part is that along the coast; but this is very unpleasant in winter, being so exposed to the N. winds, that the waves beat against the walls of the houses,

houses, some of which are built of unburnt bricks, some of chalk and pebbles, and others of bajareques.

VALPARAISO, besides its parish church, has a convent of Franciscans, and another of Augustines; but very few religious, and the churches belonging to them small and mean. It is inhabited by families of Spaniards, and Casts, both Mulattoes, and Mestizos. In its neighbourhood are several villages, and the great number of farm houses give the country a chearful appearance. Here is a military governor nominated by the king, who having the command of the garrisons in the several ports, and of the militia of the place and its dependences, is to take care that they are properly disciplined.

THE proximity of this port to Santiago has drawn hither all the commerce formerly carried on at that city. To this it owes its foundation, increase, and present prosperity. At present all the Callao ships which carry on the commerce between the two kingdoms come hither. The cargoes they bring are indeed but small, consisting only of the goods already mentioned, as not produced in Chili. But in this port they take in wheat, tallow, cordovan leather, cordage, and dried fruits, and with these return to Callao; and a ship has been known to make three voyages in one summer, namely, between November and June, during which interval, the droves of mules and carriages from all the farm houses in the jurisdiction of Santiago, bring fresh supplies to the warehouses, that trade is carried on both by land and sea. The masters of ships, who generally reside at Lima or Callao, enter into partnership with the landed gentlemen of Chili, that the cargo of every ship generally belongs in part to the master; tho' some ships are freighted, and if the loading be wheat, greatly augments its value; for the fanega costs here only ten or twelve rials, or two dollars, and the freight is from twelve rials to two piasters. Another circumstance which raises
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the price of wheat at Callao, where it is sold for twenty-four or thirty rials is, that the fanega is there only five arobas, and five pounds, whereas at Chili the fanega is six arobas and six pounds.

THIS commerce being carried on only in summer, that season may be termed the fair of Valparaíso; but on the approach of winter the place becomes as remarkably desolate, the crowd of traders repairing to Santiago, those only continuing at Valparaíso, who cannot afford to remove.

VALPARAÍSO is abundantly supplied with provisions from Santiago, and other places in its neighbourhood; but ships do not victual here so cheap as at Concepcion. The fruits cannot be viewed without admiration, both with regard to their beauty and size, particularly a sort of apples called Quillota, being brought from that place; they prodigiously exceed the largest in Spain, and besides their exquisite flavour, are so luscious that they melt in the mouth.

AMONG the several kinds of game, there is here such a plenty of partridges in their season, which begins at March and lasts several succeeding months, that the Santiago muliteers knock them down with sticks without going out of the road, and bring great numbers of them to Valparaíso. But few of these or any other birds are seen near the town. It is the same with regard to fish, very little being to be caught either in the harbour or along the coast, in comparison of what may be taken in the other parts.

THE coast of Valparaíso forms a bay, lying N. E. and S. W. three leagues in length, and having two capes called Concon, and Valparaíso. In the S. W. part of this bay is the harbour, of a convenient size, and running above a league farther up the country. The bottom is a firm tenacious mud. At the distance of a cable's length and a half from the shore, is from fourteen to sixteen fathom water, which increases in depth proportional to the distance, that at the distance
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of half a league there is thirty-six or forty fathom. The harbour is every where free from rocks and shoals, except to the N. E. of the breach de los Angeles, where, about a cable's length or two from the land is a rock, which must be the more carefully avoided, as it never appears above water, but sometimes has not a depth sufficient for a ship of any burden to pass over it. The course into this harbour is to keep near the point of Valparaiso, within a quarter of a league from the shore, where there is twenty, eighteen, and sixteen fathom water. After getting round the point you must stand nearer to the shore, in order to avoid a bank, which lies thereabouts. Not, that it can be attended with any danger, for the side of it is so bold, that if the ship should touch it little damage could ensue. This bank is always above water, and there is a necessity for passing so near it, in order to keep to windward, as otherwise it would be difficult to fetch the harbour. Regard must also be had to the time proper for entering the port of Valparaiso; for it is by no means proper to attempt it in the morning, as the wind tho' blowing fresh without does not then extend so far into the bay, and thus the ship, by having very little way, and, consequently not answering her helm, might drive upon the bank; and to let go your anchor in fifty fathom water, which is the depth close to the sand, will be very inconvenient. The common method therefore is, to keep in the offing till about noon, or something after, when the wind usually continues to the bottom of the harbour; and then by observing the abovementioned rules, the ship will fall into her station without any difficulty. Or you may run into the bay and there come to an anchor, till the day following, and then weigh early and go in with the land breeze, here called Concon, as blowing from that point; and this breeze may be depended on every day at a certain hour, except during

ing the time of the N. winds, which cause some alteration in it.

THE safest method of mooring ships is lying one anchor on the shore towards the S. S. W. and another in the channel towards the N. N. W. The former must be well secured, as the resource against the S. and S. W. winds ; for though they come over the land, they are often so violent, and the shore of the harbour so sloping, that the ships would otherwise drive.

As soon as the north winds set in, which happens in the month of April and May, the vessels in the harbour are exposed to their whole violence, which also causes a very high sea. In this exigence, the whole security of the ships depends on the anchor and cable towards the N. N. E. it will therefore be very proper to lay another in the same direction ; for if it should give way, it would be impossible to hinder the ship from striking on the rocks near the shore. The only favourable circumstance here is, that the bottom being very firm, and rising towards the shore, the anchor has good hold ; and consequently the whole depends on the strength of the cable.

CHAP. XI.

Voyage from VALPARAISO to CALLAO ; second return to QUITO to finish the observations ; third Journey to LIMA, in order to return to SPAIN by the way of CAPE HORN.

THE service our squadron was employed on, being that of cruising in those seas, in quest of the enemy as long as it should be thought requisite, the commodore, without staying any longer than was absolutely necessary, came on board, and we immediately

diately put to sea, and several times visited the islands of Juan Fernandes, till the 24th of June, 1743, when we shaped our course for Callao, which port we entered on the 6th of July. The day following the commodore and principal officers went on shore, and were received by Don Joseph de Llamas, general of the forces in Peru, and governor of Callao; who, on account of the first employment, resides at Lima, but was come to Callao to compliment the commodore. He attended him to Lima, and introduced him to the vice-roy, who expressed his great satisfaction at his safe arrival after such long expectations. He was also met on the road by the principal persons of the city.

AFTER taking our departure from the island de Tierra de Juan Fernandes, we steered the three first days N. N. E. and N. E. one quarter northerly, having fresh gales at W. and a heavy sea from the S. W. When we came into the latitude of 28° , $30'$ we steered N. six or seven degrees easterly, till the third day at nine in the morning, when being in the latitude of 16° , $28'$, we made the land on the coast of Chala; and the day following, being the 4th, the island of Sangallan, which at noon bore E. N. E. distance six leagues. We then coasted along the shore; and on the 5th at noon we saw the isle of Asia, bearing E. N. E. six leagues distant; and on the 6th as before mentioned, the squadron came to an anchor at half an hour after one in the afternoon, in Callao harbour.

HENCE it appears, that till we were in the latitude of 28° , $30'$, the wind was at S. W. which agrees with my observations mentioned Chap. III. relating to this sea; and if no other circumstance concurred to verify them, it must be imputed to the season of the year, it being the beginning of winter when we returned to Callao. But as during the first three days, the strength of the wind had driven us near the coast; so from the latitude we found it farther to the south;

south; between 25 and 21, began to incline towards the S. E. and from the latitude of 20°, when we found ourselves near the land, till our arrival at Callao, we had the wind S. S. E. and E. S. E. It was the same with regard to the sea coming from the S. W. for it gradually diminished as we approached the coast: so that from 25 it was not at all troublesome, and after we were passed 21° became imperceptible. But it was very different with regard to the current, which from the parallel of 20 or 21°, we perceived to set towards the N. W. parallel to the direction of the coast, and became much more sensible after we had sight of the land, its velocity increasing, as latitude decreased.

I would recommend two precautions to be used in the voyage from Chili to Callao. The first is not to make the land in the bay of Arica, the many eddies of the current there rendering it very difficult to get again clear of the coast; which must be done by keeping along shore; as by standing out to sea, you will be in danger of not reaching the harbour: for the current setting N. W. on standing in for the land, you will probably find yourself to leeward of the harbour; in which case it will be far from easy to work up against the wind and strong current. The second flows from the former, and is to make the land somewhere between Nasca and Sangallan, as the coast may be then kept at a proper distance, and the danger of falling to leeward of the port avoided: a misfortune which has happened to many, who have been carried farther out than they expected; so that after a long look out for land, they find themselves on its first appearance to leeward of their port.

In winter, especially, too much care cannot be taken, as from the continual thickness of the atmosphere, observations cannot be made so often as requisite; sometimes not for five or six days successively; at the same
time

time the sight of land is entirely intercepted by the density of the fog. This we experienced ; for after we were anchored in Callao at only a quarter of a league distant from the land, the people on the shore had no sight of the ships: and it was owing to our being very near the coast that we made the harbour ; for had we been at a distance, we should have been far to leeward, when the weather cleared up.

ON the 25th of June, being the second day after our departure from the island de Tierra de Juan Fernandes, we saw a meteor like that we had before seen at Quito, namely, a globe of fire, or large globe of inflammable exhalations. It first appeared in the west, at half an hour after three in the morning, and moved with great velocity for a considerable space towards the east, as if carried by the wind. The light of this meteor was such, that the watch on the quarter-deck could plainly distinguish every person on the fore-castle ; and both were not a little terrified. The phænomenon lasted between three and four minutes, and half an hour after we felt two violent shocks, at an interval of about a minute and a half betwixt them, so that all apprehended the ship had struck on some shoal ; but on reflection we concluded it to be the effect of an earthquake.

THE squadron being safely arrived at Callao, with the commander in chief of the south-sea, a title given to Don Joseph Pizarro, and a sufficient number of officers of such distinguished zeal and experience, that they might well supply our place without detriment to the service ; and, at the same time, we being willing to put the finishing hand to our principal work, we asked the vice-roy's leave to return to Quito ; but his excellency was desirous that we should first compleat some particulars he had committed to our care. Accordingly we applied ourselves assiduously to our work ; and Don George Juan, having finished his part first, left Callao on the 14th of November, proposing

posing to make all the necessary preparatives against my arrival, that the proper observations might be made without delay. On the 27th of January, 1744, I reach'd Quito, where I found Don George Juan had, by his extraordinary care, nearly finished every thing necessary for the continuation of our work; and whilst the remainder was performing, we had an opportunity, in conjunction with Mr. Godin, the only French academician now remaining in this province, of observing the comet which appeared this year.

THOUGH the comet might have been seen on the 2d and 3d of February, the atmosphere of Quito being so unfavourable to astronomical observations on account of the clouds, it was the 6th before we could observe it. The comet was then near the western part of the horizon, and being behind the mountain of Pichinca, its altitude concealed it from our sight, so that we could not observe it after seven or eight at night. On the 6th, at seven in the evening, we found its altitude above the horizon to be 15° , and its azimuth from the N. 72° ; Mr. Godin and Don George Juan judged its nucleus to be oblong, to me it appeared perfectly circular; but we all agreed that it was larger than Jupiter. The tail, which we discerned through some light clouds, seemed to extend two degrees, and to form with the verticle circle, an angle of near thirty degrees.

On the 7th, at eight minutes after seven in the evening, on repeating our observations, we found its altitude to be 11° , $11'$, and its azimuth from the north 72° , $45'$. From this second observation, which we considered as more accurate than the former, having made proper allowances for refraction, we concluded that the right ascension of the comet was 332° , $50'$, and that its northern declination was 20° , $5'$. Whence we inferred, that its trajectory was the same with that observed in 1681 by Cassini, and by Tycho Brahe in 1577, and that, in all pro-

bability it was the same; for though the periods do not agree, it might have appeared twice in the first interval. After this we were hindered from prosecuting our observations by the cloudiness of the nights: and some days afterwards we were assured by several, that they had seen it in the morning.

As all the triangles on the north side from Pambamarca, to the place where Mr. Godin had made his second astronomical observations were not completed, and the instrument constructed for that purpose kept in readiness, we made that our first task; Mr. Godin not having then gone through them all. After finishing every thing here, we repaired on the 22d of March to the observatory de Pueblo Viejo de Mira, where meeting with the same difficulties from the thickness of the atmosphere, as we had before experienced during the whole course of our operations, we were obliged to continue there till the 22d of May, when being satisfied with the accuracy of the observations made during this long interval, we returned to Quito, with the pleasing expectation, that our perseverance against the constant difficulties we met with from the clouds was at last come to a period; and that we should now rest from the toils and hardships of living on frozen deserts; a repose the more pleasing, as it was accompanied with a consciousness that no inconveniences had occasioned us to omit the least part of our duty.

DURING our stay at Mira, Don George Juan applied himself to observe the variation of the magnetic needle, and by four observations nearly coincident, he concluded to be nearly 8° , $47'$, easterly.

We now began to deliberate on our return upon the favourable opportunity of the above-mentioned French ships, which were preparing to sail for Spain; as we should then pass round Cape Horn, and not only complete from our own experience, an account of the south-sea, but be enabled to make observations on the whole.

whole course. Another, and indeed our principal motive was, the safety of our papers, concluding there could be no danger in a neutral ship, as we then imagined those to be. The concurrence of so many advantages immediately determined us; and leaving Quito we set out for Lima, where I arrived first, Don George Juan having some days been detained at Guayaquil by a fresh commission by the vice-roy. These ships, not sailing so soon as expected, I employed the interval in drawing up an extract of all interesting observations and remarks, and presented it to the vice-roy, who was pleased to order the papers to be preserved in the secretary's office, that if any misfortune should happen to us in the voyage, our sovereign might not be totally disappointed in his generous views of promoting the useful sciences of geography and navigation.

WHILE we were employed in finishing our observations at Mira, the university of Lima gave a remarkable testimony of their sense of Mr. Godin's eminent talents, by chusing him professor of mathematics, in the room of Don Pedro de Peralta, deceased; which he accepted of with the greater satisfaction, as some indispensable affairs of his company would not permit him to gratify his desires of returning to Europe. Accordingly he proposed to spend this interval in making fresh observations and experiments, concluding that the atmosphere of Lima, during the summer season, would be more favourable to his designs than that of Quito or the mountains. On his arrival at that city, the vice-roy, who was no stranger to his great abilities, and pleased with the prudent choice of the university, conferred on him, at the same time of his being invested with the professorship, the post of cosmographer to his majesty; with other advantages annexed to it. But this gentleman was far from proposing to make any longer stay there than what these affairs required; no advantages

or honours being sufficient to make him forget the obligations he was under of giving an account of his voyage and observations to his sovereign and the academy, especially as being the eldest of the three academicians; so that all the testimonies of esteem could not suppress his uneasiness at the delay.

M. de Jussieu, tho' with the same regret as the former, determined to continue some time at Quito, with M. Hugot, till he saw what turn the war would take, that he might escape, in his return to Europe, those dangers then so common at sea. M. Verguin chose to go by the way of Panama: and the others, except the two who died in the country, one at Cayambe, and Cuenca, were dispersed; one settling in Quito. Thus, the whole French company separated: and it must be considered, as a singular happiness, that after such a scene of labours, hardships, and dangers, in such a variety of climates, and amidst such inhospitable deserts and precipices, our operations were accurately performed: and we capable of entering on a new scene of dangers and difficulties, which it was our fortune to experience before we were in a condition of presenting this work to the publick.

BOOK III.

Voyage from CALLAO to EUROPE ; with an Account of the Voyage from CONCEPTION in CHILI to the island of FERNANDO DE NORONA, CAPE BRETON, NEWFOUNDLAND, and PORTSMOUTH in ENGLAND : and from the same Harbour in the South-sea to CAPE FRANCOIS in St. DOMINGO, and from thence to BREST in FRANCE.

CHAP. I.

Departure from CALLAO. Arrival at the Bay of CONCEPTION. Voyage from thence to FERNANDO DE NORONA.

HAVING, as I have already observed, determined on the voyage for returning to Spain ; on our arrival at Lima, in the year 1744, we were informed that two of the French frigates, Notre Dame de la Delivrance and the Lys, lay at Callao, and were soon to sail. Such a favourable opportunity was not to be missed, and accordingly Don George Juan and myself agreed for our passage, and also to make the voyage in separate ships, that one at least might escape the dangers to be apprehended in so long a voyage ; there being thus the greater probability that one might reach his country, and there give an account of our proceedings with regard to the commission with which we had been honoured.

THE vice-roy had given us leave to return with the greatest marks of esteem ; and the ships being ready we embarked on the 22d of October ; and the same

day put to sea, steering our course for Chili. The two frigates kept company till the 11th of November, when they separated in the latitude of $33^{\circ}, 40'$, the *Lys* being obliged to touch at Valparaíso, whilst the *Delivrance* continued her course for Conception bay; where she came to an anchor on the 21st of November. This voyage was remarkably short, being performed in twenty-nine natural days. What greatly contributed to this expedition was, that having put to sea at the end of winter, we fell in with some breezes at N. which carried us to the southward, and saved us the trouble of standing so far out to sea, as must be done when the summer is advanced.

IN this bay we found the *Louis Erasme* frigate, which had waited there some time, in order to sail in company with us; and on the 6th of January, 1745, we were joined by the *Lys*, accompanied with another French ship, called *la Marquis d'Antin*, which having come hither as a register ship, had taken in a loading of cacao at Guayaquil, and was in her return to Europe. The season being far advanced, our little squadron put to sea the first fair wind; which happened on the 27th of January, when about ten in the morning we all got under sail, steering W. and W. one quarter northerly, according as the winds would permit, which were continually varying from S. W. to S. S. E. On the fourth of February we found ourselves in the latitude of $35^{\circ}, 21'$, and $9^{\circ}, 38'$, west of the meridian of Conception; when the wind blowing fresh at S. W. by W, we tacked in order to stand to the southward. The next day we were informed that a very dangerous leak had been discovered in the head of the *Lys*, and that it was so far under water as not to be stopped without going into some harbour and lightening the ship; which had determined the captain to run into some of the harbours of Chili in order to stop the leak; accordingly he left the rest of the fleet the same day. The *Delivrance*, on board of which I embarked,

was

was in little better condition, making daily a great deal of water ever since our departure from Conception. But the captain, unwilling to lose the benefit of sailing in company, and, at the same time, fearful that his men would leave the ship, determined to keep the sea. He also apprehended, that as the ship's hull was very old, and greatly shattered by her late voyage, on being searched, the necessary repairs would require a considerable time; and thence, besides the costs, he would find it difficult to get round the cape that year. These considerations determined him to continue his voyage, without acquainting the other ships of the bad condition of his vessel. But this prudence had nearly proved fatal to all on board, as the defects were greatly increased during the course of the voyage.

TILL the 6th the winds were variable, sometimes fresh, then dying away; the sea proportionable, running high in a fresh gale, and abating with the wind.

FROM the latitude of 35° , $21'$, we steer'd between the S. E. and S; and on the 12th, being in the latitude of 41° , $20'$, we were obliged again to steer between S. W. and W. till the eighteenth; when we found ourselves in the latitude of 45° , $20'$. The winds were first at W. afterwards N. N. E. from which they changed to the E. N. E. and N. E. and varying continually, at last shifted to the S. E. S. and E. During this interval, every change of the winds was attended with calms and violent showers; and at other times the sea was covered with fogs, or the atmosphere so clouded with vapours as to intercept the rays of the sun.

FROM the time we left Conception till the 7th of February, being then in 36° , $12'$, and 9° , $20'$, west of the meridian of Conception, we always saw that kind of birds called Pardelas, but here they left us. On the 11th, in the latitude of 40° , $45'$, and something more to the westward than on the 7th, we saw

a number of small black birds, flying singly, and against the current of the water. On the 15th, the weather being fair, but the wind blowing fresh at W. S. W. we saw a Quebrantahueffos, or offifrage; and on the 16th, being in the latitude of 44° , $31'$, and 11° , $24'$, west of the meridian of Conception, we saw several flights of Curlews and Pardelas; and the Quebrantahueffos kept continually in sight of the ship: soon after the wind came about to the S. W. and blew so strong, that the frigates were obliged to hand all their sails except their courses. On the 18th the wind abated, the sea, which ran exceeding high, became tolerably smooth, and the Quebrantahueffos disappeared at the beginning of this welcome change of weather.

FROM the 18th to the 26th our course was east, one quarter southerly, and S. E. one quarter easterly; the winds being variable between the S. S. W. and W. S. W. with some short transitions to N. W. From the 26th to the 3d of March we steered E. S. E. and E. with the same winds, but so very variable, that from W. they shifted to the S. W. and from thence flew about to the E; so that in this interval they blew from every point of the compass, but rarely continued a single day in one direction. Sometimes for three or four hours we had a fresh gale, this soon died away, and was often succeeded by calms, being regular only in inconstancy.

ON the 20th of February we had a strong gale of wind at W. S. W. which obliged us to double reef our topsails. We were then in 48° , $2'$, latitude. On the 21st the wind abated, and continued so all the morning with an easy sea. At noon the wind freshened, and a storm came on at W. N. W. W. and W. S. W. so that we could carry only our reefed courses. The storm continued till the 23d about sun-set, when we let out the reefs in our courses, and set our topsails, after reefing them. During the whole time we had

had a very hollow sea, and at the same time the atmosphere so hazy, that sometimes we lost sight of the other ships. This fog precipitated itself in a mizzling rain, which continued incessantly two days after the storm was over.

ON the 20th we were amused with the sight of a great number of birds of all sizes, and among them one larger than a goose, and entirely black. On the 21st their numbers increased, some of which were larger than the *Quebrantahueffos*, but seemed to be of the same species. All the feathers of this bird were white, except those on the upper part of its wings, which were brown. Its wings were long, slender, and something curved. On the 22d when we were in the latitude of 51° , $2'$, and 9° , $35'$ west of the meridian of Conception, they continued with us in the same numbers. On the 23d they increased, and among them were several gulls. The feathers on the bodies of the latter were white, their tails short and broad, their necks large but well proportioned, and their heads and beaks answerable: on the upper parts of their wings the feathers were black, and white underneath; the wings very disproportionate in length, and considerably crooked at the middle articulation. This bird flies very swift, sometimes just above the surface of the water, then mounts into the air; and after taking two or three gyrations, they again dart down near the waters edge. On the 25th, the weather being foggy, with a mizzling rain, in the latitude 55° , $6'$, and 6° , $42'$, west of the meridian of Conception, we saw great numbers of birds, and among them the *Quebrantahueffos* of both the kinds already mentioned, and on the 26th several *Toninas*, a kind of wild ducks.

ON the 27th we had little or no wind, with snow and hail. The birds shewed themselves in greater numbers and variety than before; but the most numerous were gulls, like those already described, but the colours something different; some being of an ash colour,

colour, others had their whole bodies white, and their wings black, and others the reverse. Some, though very few, were entirely black, without the least spot of white. We also saw among them the Toninas, with their white bellies and brown backs.

ON the 1st on March, being in the latitude of 57° , $50'$ and $0^{\circ} 3'$ east of the meridian of Conception, we saw some whales, but the number of birds were considerably diminished: the snow and hail still continued; the dense clouds, which were continually forming in that part of the horizon whence the winds blow, precipitating themselves in these meteors; and though the winds were moderate, the clouds were constantly gathering. On the 3d we had thick weather; the cold became extreme, and a great deal of snow fell. The birds, also, returned in their former numbers; principally of the larger sort.

ON the same day, at noon, in the latitude of $58^{\circ} 40'$, and $4^{\circ} 13'$ E. of the meridian of Conception, a little W. of the meridian of Cape Horn, and 60 leagues to the southward of it; we altered our course, steering E. N. E. and continued sailing between that and the N. E. till the 28th of the same month. But the winds were so variable and unsettled, that there was scarce a day in which they did not blow from two different quarters, and sometimes from points almost opposite.

ON the 4th we had fair weather, with the wind at N. N. E. and W; on the 5th at S. E. and W; on the 6th S. and S. W. changing round the whole compass, and scarce ever continuing a day in one point, till the 8th, when we found ourselves in the latitude of $55^{\circ} 16'$ and $14^{\circ} 30'$ E. of the meridian of Conception, having weathered both Cape Horn, and Staten Land. It snowed and hailed continually, so that it was six inches deep on the deck: but now it began to diminish, and with it the cold. The birds likewise no longer appeared in such vast flocks:

and on the seventh we saw a new species of a dark brown colour, greatly resembling geese, and, like them, keep swimming on the water for a long time. On the 8th we saw birds of a brown and white colour, in small flocks, of ten or fifteen in each. These also swam on the water, and when flying, kept always near the surface. On the 9th being in the latitude of $54^{\circ} 21'$ and $16^{\circ} 10'$ E. of the meridian of Conception, besides the same flocks of birds, we also saw Pardelas, but of a less size than those in the south sea. On the 10th in the latitude of $54^{\circ} 1'$, and $17^{\circ} 38'$ E. of Conception, the winds were very variable between the N. N. E. and S. W. with so thick a fog, that the ships fired guns to avoid running foul of one another; for each had kept two guns mounted for making signals. We had also heavy showers, and in the evening saw flocks of birds, most of them of middling size, with dark brown feathers, and slender crooked wings. The whole difference between them consisted in the size, their form and colour being perfectly alike; and tho' we saw them during the whole day, they were in the greatest numbers from four to six in the evening. On the 11th being in the latitude of $52^{\circ} 15'$, and $18^{\circ} 9'$ E. of Conception, we observed that the colour of the water was changed, it being now greenish; but another days sailing brought us into water of its usual colour. On the 12th and 13th the wind blew fresh at N. W. and W. accompanied with heavy showers, but of no long continuance, nor attended with any bad consequences. Among the birds seen these two days, and which were more numerous than before, two species in particular engaged my attention; one large, resembling vultures, with black wings, and their bodies of a light brown spotted with white: the other, tho' little different in colour from the former, did not exceed the Pardelas in size: both sorts kept near the ship; and our men told us
they

they had seen a shoal of fish, which had probably drawn such numbers together.

ON the 14th the wind variable betwixt the W. N. W. and S. W. and our latitude $48^{\circ} 12'$, we began to be sensible of an agreeable change in the temperature of the air; in the day time it was not cold upon deck, and at night the cabins were warm. On the 15th we had a fresh gale at W. N. W. and N. W. with a hollow sea, which continued the two following days being the 16th and 17th, the weather was very hazy, sudden showers frequent, and the same number of birds still continued. On the 16th the marquis d'Antin came along side and told us, that the ship had sprung a leak, and that they had laboured the whole night to stop it, having, after a long search, found it to proceed from a hole made by the rats in one of her quarters near the water's edge. This obliged them to heel the ship in order to stop it, and the other two slackened sail that she might come up with them. On the 17th we saw many large whales, several of which played round the ship for a considerable time.

THE wind during the last day was at S. E. and at S. S. E. but moderate; the sea smooth, with showers of rain; when we found ourselves in the latitude of $44^{\circ} 30'$ and $25^{\circ} 13'$ E. of Conception, and saw several flights of birds both of the large and small species, but different in colour from any we had seen before, being intirely white.

THE water now increased so prodigiously in our ship, that for some days our men had been almost continually labouring at the pump, which quite exhausted their spirits; and all of us under the greatest apprehensions of perishing. Nor was this a sudden panic, the water sometimes increasing so suddenly, that notwithstanding all our efforts it seemed to gain upon us. We observed that the principal leaks were at the head and stern, and the 19th proving a fine day,
we

we hoisted out our boat, for the carpenters to nail sheet lead over the seams; but the sea ran too high for them to execute it.

ON the 20th the wind blowing strong at N. and N.E. one quarter northerly, and the sea running high, we laid to, under our mainfail; but rain coming on, we had, next day, moderate weather. The wind continued in the same quarter till the 25th, but little of it, with fogs and showers. We were now in the latitude of $39^{\circ} 14'$ and $30^{\circ} 5'$ E. of the meridian of Conception. During these days we saw several birds, but in much less numbers than before; some of them very different, as black pardelas, and others of the same colour, but of an unknown species.

THE water in our ship was now so greatly increased, and our men so spent with continually labouring at the pump, that we had thoughts of quitting her; and doubtless this would have been done some days before had it not been for her valuable cargo; having on board near two millions of Peruvian dollars, a million and a half of which was in gold and silver, and stowed under the cacao she had taken in at Guayaquil. In order therefore in some measure to keep out the water, a sail quilted with oakum, and shot fastened to the clues to sink it, was lowered into the water from the head of the ship; but this expedient had little effect. For tho' at first the water did not seem to enter with the rapidity as before, yet the oakum which prevented it, was soon carried away, when our condition was not mended in the least.

FROM the 29th, when we were in the latitude of $35^{\circ} 38'$ and $33^{\circ} 27'$ E. of the meridian of Conception, our course was W. N. W. till the 4th of April, when till the 20th we steered between the N. E. and E. N. E. with the same variable weather, showers, hard gales, and calms. So that during this long interval of twenty nine days, our latitude diminished little more

more than nine degrees and a half, finding ourselves in the latitude of $25^{\circ} 55'$; and between the twenty eight and twenty ninth degree we were detained from the 7th to the 15th without being able to make better way. On the 29th of March we saw Pardelas and the other kind of black birds. On the 30th we took down our weather boards, and got our top-gallant-masts up. During this time the birds seemed to have entirely forsaken us; but on the 3d of April, we saw great numbers; and on the 5th and 6th we saw a new species, resembling a lark in shape and size. Here we had also a first sight of the Dorados; but from hence we never missed seeing that fish and also the bonito. On the 8th in the latitude of $28^{\circ} 58'$, we began to meet with very thick fogs, violent and frequent squalls of wind and rain, which continued with little or no intermission to the 13th, but that day proving fair, we made use of it in getting up and mounting our guns. The carpenters and caulkers were ordered into the boat, to endeavour to stop the leaks at the water's edge; for tho' they had nailed sheet lead over the seams, it did not answer the purpose, the water nearly issuing with the same rapidity. On the 18th being in the latitude of $26^{\circ} 52'$, we first saw the flying-fish, and Taburones, but afterwards we had continual sight of them, their numbers increasing in proportion as we lessened our latitude.

In the latitude of $39^{\circ} 14'$ on the 25th of March, Don Pedro de Arriago, freighter both of the *Louis Erasme*, and *la Delivrance*, made an offer to the captains, that if they thought it necessary, provisions and water growing scarce, they might put into the harbour of Monte Video, where they might not only refit the ships and provide them with all necessaries, but also take the benefit of a convoy, the *Asia* man of war being to sail for Spain about that time, with commodore Don Joseph Pizarro;
adding

adding that it was the more adviseable to embrace this opportunity, advice having been received from Europe, three or four days before their departure from Conception, that France and England were at war. But the captains from selfish motives rejected this salutary proposal, tho' at the same time they must be sensible that the want of water and provisions, together with the bad condition of our frigate, would unavoidably oblige them to put into some harbour. And this, in opposition to the worthy merchant's advice, they determined should be the desert island of Fernando de Norona; for tho' the Portuguese of Brasil had some time since sent a colony thither, it was abandoned on account of its sterility. The French India company also had for some time a settlement there, but were obliged, on the same account, to leave it; and during the time of that settlement, the captain of the marquis d'Antin had been there, and thence knew that it abounded with water and wood, the two articles mostly wanted. Don Pedro Arriago adhered to his first proposal, and it had doubtless been complied with by the two frigates freighted by him, had not the marquis d'Antin been in company, the captain of which made use of such plausible reasons in support of his opinion, that it prevailed, and we accordingly steered for the harbour of Fernando de Norona.

FROM the 20th to the 26th of April, we had calms and squalls, and from thence to the 8th of May, when we found ourselves in the latitude of 16 deg. 58 min. we had little wind, and variable between the N. and E. but mostly at N. E. nearly. On the 8th the wind began to freshen, and tho' for several days it was at E. and E. N. E. we had it generally at E. S. E. till our arrival at Fernando de Norona. Our course from the 20th of April, was as the winds would permit, sometimes N. N. W. N. W. one quarter northerly, and W. N. W. but from the 7th of May,

May, when the wind settled to the eastward, we steered N. and N. one quarter easterly to the 15th, when finding ourselves in the latitude of 4 deg. S. being nearly the same with that of Fernando de Norona, we stood directly W. and having sight of it at half an hour after nine in the morning of the 21st of May, all the frigates at half an hour after three in the evening, came to an anchor in the road; to our no small joy. This voyage had continued an hundred and fifty days, and been attended with great fatigue and anxiety, on account of the bad condition of our frigate. For more than once, we had the greatest reason to apprehend she would founder, before we had time to provide for our safety.

FROM the 6th of April, we saw no birds till the second of May, when being in the latitude of $20^{\circ} 18'$, we saw an *Rabiahorcado*, which the French call *Tailleleur*, the taylor, from the form and motion of its tail. This bird is about the size of a wood pigeon; with a short neck, a proportionate bill, and its wings very long, broad and curved. The tail seemed to be composed of very few feathers, and these dividing at the root, so as to represent a pair of scissars opened; but when it is on the wing, it shuts and opens them at pleasure, representing the manner of using that instrument. The two blades, of which the tail consists, are very long in proportion to the body of the bird; and together with the whole plumage are of a fine glossy black, except the breast, which is a sort of very pale ash colour. It flies very swiftly, and generally high, never being seen low, but when hovering about a ship, as if intending to settle on it.

ON the 4th of May we saw a pardela as large as a wood pigeon; the feathers on its belly, breast, and under the wings, were an ash colour; and those on the neck, head, and upper part of the wings, of a dark brown. From this day, when in the latitude of $19^{\circ} 40'$, till the twelfth, when we came into ten degrees, we constantly saw some
though

though few of the two last mentioned kinds of birds ; but from that time we had no more sight of them till the evening of the 16th, when in the latitude of 4° , $30'$, nearly, we saw a different kind larger than the pardelas ; but from the slow motion of its wings we concluded it to be a land bird. It was at too great a distance for us clearly to distinguish its colours and form. We were, however, notwithstanding this signal, under a necessity of steering W. when after a run of 102 leagues we made the island. The following days we never failed of seeing a few of the same species ; but on the 19th their numbers increased. They were wholly black, except a few brown feathers on the wings. Among these birds we observed one larger than the rest, with a long neck, a prominent body, and its whole plumage of a dark brown: it moved its wings slowly, and every way resembled a cormorant. We saw him several times dart down with great rapidity to catch fish; and on the 29th in the morning we were entertained with the sight of great numbers of them, whom hunger rendered very alert in the same exercise. From the time of seeing the first, till we were directly S of the island, we sailed 33 leagues, the greatest distance these birds are known to venture out to sea. On the 20th in the evening, being betwixt ten and eleven leagues from the island, we saw several birds resembling the guanaes already described ; and at sun-set great flocks of them were flying towards the W ; whence we concluded that we were not far from the island. These birds, which the French call Fou, and the English Booby, are about the size of a goose, have a large and curved wing, all over of a dark brown, and in flying use a great deal of motion with their wings ; but when they attempt to catch a fish, they dive with the same rapidity as the guanaes.

ABOUT two hours before we made the island, we saw several Rabijuncos, a bird, which by always keeping near the shore, indicates its proximity. They

are about the size of a wood pigeon, with a short thick neck, a small head, the whole plumage white, and a long tail in the form of a rabijunco or rush, half an inch diameter near the body, tapering its whole length till it terminates in a point, whence it was called Rabijuncos. These birds are never seen above eight or ten leagues from the shore.

From the time we first saw the Dorado and Bonito, the last increased in numbers as our latitude diminished. We now also saw the Tunny, and a great many flying fish. We caught some of all kinds; and here it is not unworthy notice, that the Bonitos and tunny-fish bite only from day-break till about seven in the morning, and again in the evening from sun-set till dark.

CHAP. II.

Nautical Observations and Remarks on the Voyage round CAPE HORN.

FROM the time of our steering west, being in the latitude of the island, till we were under its meridian, we sailed 5 deg. 4 min. and a half, tho' all on board, who had kept an account of the ship's way, imagined we were to the westward of it; but the variation of the needle convinced us, that our reckoning was not to be depended on, and that the ship was much farther to the eastward than we imagined: an error owing principally to the motion of the currents, which had drawn us at such a great distance from the land; all the French pilots on board the *Delivrance* agreed in this particular; and some related, that when they thought themselves near the land, they had often found the ship above three hundred leagues to the eastward of their reckoning. I did not, however, make any correction in my journal on
this

this account; for which I had two reasons. The first, that I might be able to judge of the distance the currents had carried us to the eastward. The second, was an unwillingness to commit a fresh error by making an uncertain correction, as I was not satisfied that there were any currents; and consequently unable to guess at their velocity; some affirming they had found them very violent; and others as positively asserting, that they had never met with any. This was the case of the three frigates when they entered the south-sea: and the captain of the *Delivrance* informed me, that without attending to the currents in going round the cape, in the latitude of 62 degrees, his reckoning perfectly agreed with the time of making land; and that several Frenchmen had done the like: but, on the other hand, it has happened to some, that when they imagined themselves in the south-sea by the place of the ship according to their reckoning, steered N. E. till from the disappointment of not falling in with the land, at the time expected, had convinced them that they had not weathered the cape; and accordingly steering towards the W. they have found their suspicions confirmed by making the coast of Brazil, or Buenos Ayres.

ON the 21st of May, at one in the afternoon, we were under the meridian of Fernando de Norona, and at above three quarters of a league distant to the northward of it. Whereas according to my computation, the frigate was only $29^{\circ} 56'$ E. of the meridian of Conception: but by the modern French map, laid down from the observations sent to the academy of sciences, in which the longitudes of all places are marked with all the accuracy which distinguishes the works of that learned body, this island lies no less than $42^{\circ}, 32', 30''$, E. of the meridian of Conception; consequently the difference between my reckoning, and the true longitude of the island, being $12^{\circ} 36', 30''$, is the distance

which the currents carried our frigate to the eastward, exclusive of her lee-way.

ON the 15th of May, namely, before he began to steer W. we spoke with the marquis d'Antin, and her captain gave us to understand, that according to his reckoning, the ship was then $45^{\circ}, 3'$, E. of the meridian of Conception. Whereas the distance, according to my account was only $34^{\circ}, 19'$. Thus the ship, according to his computation, was $10^{\circ}, 44'$, further to the eastward than by mine, and the difference on the ship's arrival at the island, will be 2° the distance the currents had carried him to the eastward beyond what he had judged. The captain of the *Delivrance*, on the same day, made the ship $39^{\circ}, 15'$, east of the meridian of Conception; that is $4^{\circ}, 56'$, more than I; and consequently on reaching the island, his account was $7^{\circ}, 40'$, further to the westward than the ship. Others, who kept a journal on board the *Delivrance*, differed as much; some nearly agreeing with me, namely, those who had made no allowance for the currents; whilst others approached nearer to the account of the captain of the *Marquis d'Antin*, having used an equation in respect to the currents. But every one, at making the island, found their reckoning erroneous; the ship, according to their accounts, being farther to the westward than she really was; but differed in the quantity of that error, according to the different allowances they had made for the setting of the currents.

THE difference betwixt my account and that of the captain of the *Marquis d'Antin*, who was one of those who made the ship farthest to the eastward, proceeded from the captain's knowing by observing the variation of the needle, that the frigates made more way than the reckoning allowed of, and therefore concluded that a correction was necessary, which he performed by adding a proper distance, from the journals of others, and thence inferred that the velocity of the currents was

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considerable; but as that really exceeded the allowance he made for it, his ship was always to the eastward of his reckoning. The captain of the *Louis Erasme* found the difference nearly the same as the captain of the *Marquis d'Antin*, who made use of an equation. Both, as I have already observed, founded their corrections on the variations; differing very considerably from that delineated on the charts.

THE great variety of currents met with in sailing round Cape Horn, being sometimes strong, sometimes moderate, and at others scarce perceivable, induces me to think that they were not considerable in correcting the account. For their velocity being uncertain, it is in fact only committing a voluntary error; and as the variations enable us to guess at our longitude within two or three degrees; and as after making use of the equation, the place of the ship cannot be known nearer the truth, the correction is entirely useless; and the inference drawn from observing the variation, is abundantly sufficient for security. I say, that the place of the ship may be known so within two or three degrees; and a more exact conformity between the corrected reckoning and the time of making land would be rather fortuitous than the effect of accuracy, in making the correction. The difference of one or two degrees in the variations, an error unavoidable, may produce in the longitude an error of three or four degrees, or even more, according to the place of the ship. Every one on board the three frigates, found their reckoning to the westward of the ship's true place; though they had made an allowance for the currents; and the difference between some of their accounts was not small, as I have already noticed. This was owing to the like uncertainty in the journals of other voyages they had with them; for the currents being stronger at sometimes than others, they who followed the former made a much larger allowance than those who regulated their corrections.

rections by the latter; and consequently their reckonings must have been very different. The currents therefore being uncertain, and the journals of those voyages very variable with regard to their velocity, there is no more security in following one than another, and even if we take a medium between them, there would be no more safety in relying upon it, than blindly to follow that which was thought the best. However, their utility and even importance cannot be denied, as they inform the navigator of the parts where he must expect to meet with currents, and at the same time warn him of their variety.

ONE cause of the little knowledge we have of these currents is, that this voyage is seldom made, and less by the Spaniards than by any other maritime nation; and though since the year 1716 several French ships have sailed into those seas, they have not yet been able to remove this difficulty, and settle the times of the several degrees of velocity of the currents in the different latitudes passed thro' in weathering the Cape. This is indeed only to be expected from long experience and repeated voyages; and in order to this navigators should not make any allowance for their currents in correcting their days works; for the distance between the knots on the log-line being truly adjusted as ours was at forty seven Paris feet and one third, and the half-minute glass carefully attended to, the error in the distance will be very inconsiderable, and consequently the drift of the current, on making land, known very near the truth; and this must be added to or deducted from the reckoning by account. By pursuing this method we shall advance one step towards a more certain knowledge of them.

THOUGH we are not yet able to determine the velocity of the currents, nor the times of their setting, yet we can advance one step towards it, namely, that they always set towards the E. nor is there a single

gle instance to the contrary, unless very near the land on the W. side of America near Cape Horn; the proximity of the coast causing there a great variety of eddies, and Terra del Fuego, being composed of a cluster of islands, forming as many channels, the course of the current is altered according to their disposition; and at a small distance from them the meeting of these currents is plainly distinguishable.

IN the account of Don George Juan's voyage inserted in the sequel, tho' his course in weathering Cape Horn, was nearly in the same latitude as ours, but a month later as to time, and the weather and winds very different, yet no current was perceivable; which confirms what I have already observed.

THOUGH the general winds here are towards the W. and S. W. those from the E. are sometimes known. as we experienced in passing between the 57th and 58th degree of latitude, and for three or four days after we lessened our latitude. This, however, seldom happens; and therefore a ship bound into the south-seas when in the latitude of Cape Horn, should keep as near the wind as possible, if it be at N. W. or any other intermediate point between the S. W. these being the reigning winds in all seasons, taking advantage of the first in order to gain the necessary latitude, which should be something above 60 deg. that if she should be obliged to tack with the wind at S. W. she may have sufficient sea-room in weathering the Cape; for otherwise if the wind should take her short, after two or three days, it would be necessary to return again to a higher latitude; and this is, at all times, attended with great fatigue and hardship, both on account of the rigour of the climate, and the frequency of storms, attended with the most terrible seas. It was the middle of summer when we came round the Cape, yet the snow and hail fell very thick, and the cold was proportional. And tho' when we were between the 57th and 58th degree, there was very

little wind, yet we had, to the great fatigue of the seamen, a very heavy sea from the S. W. and W. and sometimes the sea run in two or three different directions.

FROM our leaving the bay of Conception, till 17th Feb. when we were in the latitude of $45^{\circ} 17'$ the differences either with regard to excess or deficiency between the latitude by account, and that obtained by observation, were inconsiderable: But from that day, the latter was always greater than the former, as will appear from the following series. From the 15th of the same month to the 17th, the latitude by observation exceeded that by account 18 min. from the 17th to the 20th, 32 min. from the 20th to the 23d, 37 minutes and a half, from the 23d to the 27th, 33 min. from the 27th, to the second of March, 43 min. and from the 2d of March to the 6th, 20 min. and a half. We were now according to my computation, $12^{\circ} 6'$ E. of the meridian of Conception, and in the latitude of $56^{\circ} 44'$. After this the difference between the latitudes by account and observation began to decrease; but sometimes the latitude by observation exceeded that by account, and at other times was less. From the sixth to the seventh the difference was 4. min. and a half; nor did it exceed five or six at the end of three or four days in which we had no observation. This evidently shews that from the above latitude of $45^{\circ} 17'$ the currents began to set to the southward, and when the land parallel to their course failed, they ran towards the east, when it was impossible to distinguish them. But that there were still currents, and very strong ones too, seems to me beyond doubt; and it is much more natural to think, that the prodigious volume of water which ran towards the south, when there was no longer any land to obstruct its course, should incline towards the E. rather than towards the W. the latter being the quarter from whence the wind proceeded.

On the 30th of March, being in the latitude of $34^{\circ} 27'$ S. and, according to my account $32^{\circ} 47'$ E. of the meridian of Conception, we came into a current, which seemed to set S. E. the latitude by observation exceeded that by account by 10 or 11 min. But from the 21st of April, being in the latitude of $25^{\circ} 9'$, and $36^{\circ} 15'$ E. of Conception, the two latitudes agreed, and thus continued till we reached the island of Fernando de Norona.

THE variation, of which we shall soon give a catalogue, gave us to understand from the time we were under the meridian of Cape Horn, that the currents carried our ships towards the E. founding our judgment on the difference between those observed, and those given us in the journals of other voyages, conformable to the places where we made our observations. And as they may be serviceable to others in making the same voyage, in order to render them still more useful than if I had adapted them to the longitude from my account, as that was not the real place where the observations were made, I have corrected the longitude in the manner I am going to explain.

IT being certain from what has been said concerning the currents, that their effects became sensible from 45° south-latitude in a S. E. direction to the latitude of 56, or 57 degrees; that from thence they continued to run directly E. till we were in the latitude of $34^{\circ} 27'$, and $32^{\circ} 47'$ E. of the meridian of Conception: where their course turned to the S. E. and continued to run in that direction till we came into the latitude of $25^{\circ} 9'$, and $36^{\circ} 15'$ E. of Conception, where they ceased. It will therefore be necessary to divide, in all journals the $12^{\circ} 36' 30''$, which the ship was to the eastward of my reckoning, in a proportion agreeably to the interval of time between their beginning and cessation, regard being had to their velocity in those parts when they were
most

most evident by the difference between the latitudes by account and observation, and this will give the true place of the ship corresponding to the different observations.

THE observations having been made either at sun-rising or sun-setting, and the daily reckoning not been adjusted till noon, according to the common practice at sea, occasions, between the longitude determined that day, and that in which the ship really was at the time the variation was observed, a difference, which sometimes amounts to a degree or more, I have therefore taken care in the following table to settle the longitude and latitude agreeable to the hour when the variation was observed.

A TABLE of the VARIATIONS observed in the Voyage from the BAY of CONCEPTION to the Island of FERNANDO DE NORONA, in different latitudes and longitudes, the latter being reckoned from the meridian of CONCEPTION.

Days.	Lat. South		Long. from the Mer. of Concep.		Variations.	Times of making the Observation.	
	Deg.	Min.	Deg.	Min.	Deg. Min.		
28 Jan.	36	16 $\frac{1}{2}$	1	8 W.	*13	17 E.	Evening.
7 Feb.	36	23	9	25 W.	10	45	
28	57	41	0	10 E.	23	20	
2 Mar.	58	32	4	1	22	14	
8	55	28	16	24	*26	44	Morning.
9	54	57	18	32	20	00	
11	52	42	19	59	18	50	
12	50	57	22	12	18	44	Evening.
13	49	22	23	35	18	32	
14	47	52	24	24	18	42	
26	38	36	34	41	9	0	Morning.
27	37	46	35	49	10	30	
30	34	27	37	11	6	23	Evening.
1 April	33	06	35	19	5	55	Morning.
1	32	42 $\frac{1}{2}$	34	39	5	45	Evening.
2	32	15	34	27	5	10	Morning.
4	31	30	34	02	6	0	Evening.
8	29	4	37	48	4	0	Morning.
16	27	16	46	0	*2	5 W.	Evening
18	26	48	48	18	*2	15 E.	

Days.	Lat. South.		Long. from the Mer. of Concep.		Variations.		Times of making the Observation.
	Deg.	Min.	Deg.	Min.	Deg.	Min.	
19	26	49	49	1	0	40 W.	
20	26	7	48	57	0	30	
Ditto	25	44	48	46	0	15	
22	25	01	48	47	1	30	
22	24	55	48	47	1	18	Evening.
24	24	43	48	44	0	45 E.	
26	24	00	48	48	0	08	
27	23	04	48	14	0	00	
29	21	30	47	10	0	15 E.	
1 May	20	24	46	56	0	30	
2	20	15	47	10	0	05	
3	20	00	47	05	1	50 W.	Morning.
3	19	51	46	45	0	20 E.	Evening.
4	19	34	45	43	*3	00	
5	19	23	45	06	0	20 W.	Morning.
7	18	21	45	02	1	30 E.	
9	15	49	45	11	2	00	
10	13	16	45	20	0	50	Evening.
12	9	34	45	57	0	05	
17	4	10	45	29	0	22 W.	Morning.
19	4	17	43	55	1	41 E.	
19	4	18	43	40	3	25	Evening.
22	3	53	42	32	2	47	
31	3	53	42	32	1	33	

THE two last observations were taken in the harbour of Fernando de Norona; and those marked with an * were not determined with the desired accuracy, some accident intervening at the time of the observation.

It will be proper, for mariners unacquainted with the precautions customary in a voyage little frequented, to observe, that in this part of the passage they may expect to meet with very tempestuous seas, continual squalls of wind and fogs; so that it is absolutely necessary in the night and in hazy days to keep a very careful look out against the ice, large islands of which, breaking from the shore, are driven by the wind beyond the latitude of 64° , and ships too often meet with them from

55° upwards. They are usually nearer the shore towards the end of winter than in summer, when beginning to loosen themselves from the land, they gradually move from it; and not dissolving by reason of the continuance of the coldness of the air, they are always seen at higher latitudes than that of 60 deg. The *Hector*, a register ship in her passage from Cadiz to the south-sea was lost on one of these islands of ice: and many others have narrowly escaped the like misfortune.

THESE masses of ice and the many eddies of the currents render it adviseable to keep a good offing at weathering the Cape in the return from the south-sea, especially as there are some islands at a little distance from the coast, reaching to 56 deg. at least. These are at all times dangerous, both from the difficulty of determining with certainty, on account of the currents, the place of the ship; and likewise from fogs which are there so common and thick, that the whole day is as it were turned to night, and the darkness such that those on the poop cannot see the men on the fore-castle. These dangers render it therefore adviseable, that the ship in returning to Europe, should always stand into the latitude of 58 or 60 deg.

IN passing into the south-sea, a larger latitude even from 60 to 63 or 64 deg. as the wind will admit, and then steering W. 60 or 80 leagues beyond what may seem necessary by account, will be adviseable; because if the ship should have met with currents, sufficient allowance would be made for them; and consequently the great inconvenience prevented of not weathering the cape; which might be the case without the allowance of these 60 or 80 leagues. This western distance, after it appears, by the reckoning that the ship has weathered the cape, will be of little consequence, if we consider the great advantages gained thereby; it is always better
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for the ship to be obliged to sail 100 leagues eastward, till she makes the western coast of America, than to want but one of being to windward of it; for to gain only this one league, the ship must go a great way back to the southward, before she will be able to get round the cape; especially as there is little chance of having a fair wind. In a subsequent chapter, I shall more fully consider this subject, and specify other precautions necessary to be observed in sailing on that ocean.

CHAP. III.

Arrival at FERNANDO DE NORONA; and Description of that Island.

WE now from our reckonings and other signs concluded that we could not be at any great distance from the island we were searching for; and accordingly on the 20th of May, when a fog came on with rain, we laid to under our top-sails, rather from an apprehension of overshooting the island than of losing company or running foul of each other. On the 21st, having an appearance of fair weather, the frigates made sail, and at half an hour after nine, the Louis Erasme discovered the island bearing west one quarter southerly, distance nine leagues, as was afterwards verified by the log-line.

THIS island we imagined to be totally desert; but from a supposition that for the conveniency of its harbour, ships of any nation returning from the East-Indies might, either for water, or on any other necessary occasion put in there, it was agreed by the captains of the French frigates to go in under English colours; in order the better to conceal their course, and in case we found any ships of the enemy, to take the best precautions in their power for defence.

fence. But to our great satisfaction, we saw, on our approach, two forts with the Portuguese flag flying, and a brigantine with an ensign and long pennant of the same nation. We were the more surprized at this, as according to all the accounts we had received, the island was a desert, having been forsaken by the Portuguese as not susceptible of tillage: but on our arrival we were informed, that the French East India company had made a settlement on it as a convenient place for their ships to put in at for refreshments: but the court of Portugal being unwilling that either the French or any other nation should have a settlement so near the coast of Brazil, obliged them to evacuate it. This resolution was taken about seven years ago, since which these and other forts have been erected, and a colony settled on the island.

We now began to consider whether it was possible to procure any true account of the state of affairs in Europe; or whether Portugal, in the present war, might have gone farther than a neutrality. But as this could not be immediately determined, it was thought adviseable for the three frigates to agree on signals of certain import to be made at going into this harbour. In order to get in it is necessary to weather the island on the north side, as the force of the current to the southward is such, that it cannot be done at least under four or five days or more, beating to windward up to that part where the currents do not obstruct the entrance. Having been previously informed of this, when we found ourselves to the southward, and so near as I have mentioned, we steered S. W. 5 deg. westerly, and after sailing near a league till we weather'd the island, we stood S. $\frac{1}{4}$ southerly, with the ship's head directly towards a large mountain, betwixt two others plainly distinguishable; but that on the E. side was larger than that in the middle, and the other on the W. a high
rocky

rocky peak, that looks as it were falling towards the E. and on account of its height and figure called the Companario, or the belfrey. The currents here set so strongly to the westward, that after several tacks, instead of gaining ground, we found ourselves carried further from the island; so that in order to avoid any further inconveniency, we came to an anchor at some distance from the proper anchoring-place, in twenty five fathoms water, the bottom mud mixed with shells and gravel; about a league and a quarter from the shore, fort Remedios, the largest of those built for the defence of the harbour, bearing S. S. E. The prodigious sea here occasioned by the violence of the wind, and the strength of the current causing our frigates to strain on their cables, obliged us to weigh, and stand farther into the usual anchoring-place, beyond which no ships are permitted. This is about $\frac{1}{3}$ of a league from the shore: and here on the 23d of March, the Louis Erasme anchor'd in thirteen fathom water, the bottom of a fine white and black sand; fort San Antonio bearing E. 5 deg. southerly, Remedios, S. $\frac{1}{4}$ westerly. Conception S. S. W. 4. deg. westerly, and Campanario peak S. W. 3. deg. southerly.

THIS island has two harbours capable of receiving ships of the greatest burthen: one is on the N. side, and the other on the N. W. The former is in every respect the principal both for shelter, capacity, and the goodness of its bottom. But both are entirely exposed to the N. and W. tho' these winds, particularly the N. are periodical, and of no long continuance. These harbours, however, when these winds do prevail, are both impracticable, the ships being in danger, and all communication with the shore entirely precluded by the agitations and violence of the surface; for the coast being every where lined with rocks, no boat or vessel can come near it without the greatest danger of being beat to pieces.

And

And even in the season of the easterly winds, you cannot land without some danger. This interval indeed affords some days when the agitation of the sea is greatly abated, but even in these the landing must be done with great circumspection; and at other times the violence of the sea, and the rocks on all sides render it utterly impracticable. Thus throughout the whole year this harbour is by no means a desirable retreat; but happily serves on an urgent necessity of making land, notwithstanding the danger or inconveniency that may attend it.

AFTER the Portuguese had caused the French East India company to remove from this island, they secured it to themselves by fortifications; for besides the three forts which defend the N. harbour, it has two others for the defence of the N. W. and two in the E. part of the island in a small bay, though fit only for small barks, and difficult even to these. The forts are all of stone, spacious and well provided with large artillery. Thus though the whole length of the island is scarce two leagues, and it does not yield wherewithal to support the garrison, and the few other inhabitants, it has no less than seven elegant forts. It is under the government of Fernambuco, from whence it is supplied with provisions and other necessaries. But the jealousy of the Portuguese, least any other nation should get footing on it, and make that the fountain of farther pretensions, has induced them to spare no expence for keeping the forts in a condition to assert their sovereign right against any intruders.

THE principal fort stands on an high steep rock washed by the sea, at the foot of which is a cavern, where vast quantities of water are continually pouring in without any sensible outlet. In this place are heard at short intervals, very dreadful eruptions of the wind, which being compressed struggles for a vent against the torrent of the water, and by
filling

filling the whole mouth of the cave in its ascent, leaves a large vacuity after its discharge, which is done with a noise resembling that of a volcano: but neither on the opposite side of the island, nor throughout its whole circuit, is there any place or mark which affords the least room for conjecture, with regard to the other mouth of this cavern; so that it is supposed to be at a great distance from it in the sea.

THE barrenness of the island does not proceed from any defect in its soil, which produces every species of grain, and fruits common in hot climates, as experience has sufficiently demonstrated; but from the want of moisture: for besides two or three years often pass without any rain, there is not the least drop of water to be found throughout the island except in some brooks; and by reason of this scarcity the plants wither and die away in their growth. The most fruitful parts of the island unless when soften'd by moisture from the clouds, becomes as arid and barren as rocks. At the time we were there it was two years since they had any rain; but on the 19th of May came on violent showers, which continued the whole time we remained near the island. The inhabitants use the water which they save in pits resembling cisterns, but this as well as the waters of the brooks on its beginning to rain, grow thick and brackish. The Portuguese indeed say that in the inward parts of the island where these brooks have their origin, water is never wanting; and that it is clear and wholesome.

IN the inland part of the island is a Portuguese town, in which reside the parish-priest and a governor, who on advice of any ships being in sight repair to the forts, which are all well garrison'd, there being only in fort Remedios, while we were there, near 1000 men, partly regulars sent from Fernambuco, which are relieved every six months,

and partly transports, from all that coast of Brasil: and some, though few, which are settled here with their families, all being poor people and Mestizos. Here are also some Indians who are sent to work on the fortifications, and likewise to serve the governor and other officers in the island. Among these are an Almojarife or treasurer and a proveditore, who controuls the payments and issues of provisions to the troops and others: which is done with an equity and exactness worthy the imitation of Europeans.

THE common food of the inhabitants of all ranks, both here and throughout Brazil, is the farina de Pau or wood-meal, which is universally eaten instead of bread. It is made of the root called Moniato, of which I have given an account in the description of Carthagena; as well as of those of Name and Yuca. They first cleanse it and then macerate it in water, till the strong and noxious juice in it be entirely extracted: then grate or grind it into meal; which having again soaked in several waters, they dry, and then eat it with a spoon or mix it with other foods. They are so habituated to it, that even at a table where they have wheat bread at command, with every mouthful of it they take a little of this meal. Besides this flour, which is in fact, nothing more than wood-meal or saw-dust, both with regard to taste and smell, they eat a great deal of rice and sugar-cane, brought from Fernambuco. Here are two transports belonging to the king of Portugal, for bringing provisions and soldiers, the latter of which is done so methodically, that the time when they are to leave Brazil is settled: and thus while one is coming towards the island, the other is returning with the late garrison.

AFTER the second settlement of the Portuguese here, besides the little plantations which was one of their first cares, they also brought over cows, hogs, and sheep, in order to breed those useful creatures; and as

a small quantity of flesh serves the Portuguese, they are, even in this barren soil so greatly increased, that during our stay here we had the pleasure of victualling our crews with fresh provisions; and at our departure took on board a quantity sufficient to last us for several days.

THESE harbours or roads abound in fish of five or six different species: and among these are lampreys and Morenos; the last are of an enormous size, but neither of them palatable. At the bottom of this harbour is taken a fish called cope, from its triangular figure. It has a snout not unlike that of a hog; and its whole body inclosed in one bone resembling horn, within which is the flesh, intrails and other parts. On the two upper superficies it is covered with green scales, and underneath with white. It has two small fins like other fishes, and its tail which is horizontal, is also small. On being taken out of the water it immediately emits from its mouth a greenish froth of an insupportable smell, and which continues for a considerable time. Some of our people who had seen this fish in other parts affirmed, that its flesh is of such a poisonous nature as to cause the bodies of those who eat, tho' but moderately of it, to swell till they burst. But the people on this island were as positive to the contrary, and affirmed it from their own experience. They however make use of this precaution before they eat it, namely, of laying a great weight on it, that all the malignant particles might the better ooze out in the foam: and after keeping it a whole day in this manner, they open the hard shell within which it is inclosed, boil it till about half ready, and then shift it into another water. By these precautions they affirm that all the noxious particles are extracted. But, in my opinion, this troublesome process is thrown away, the taste of its flesh not being at all answerable: and were it even in any de-

gree palatable, surely the remembrance of its fetid smell must disgust the stomach.

DURING the season in which the turtles lay their eggs, namely from December to April, the shores of the whole island are covered with them; after which retiring into the sea they disappear, as was the case when we were at Norona. In these months the winds are at N. and N.W.; and from May forward they shift to the E. sometimes inclining to the S.E. and at others to the N.E. The latitude of this island, as taken by several French pilots, at the time it was in possession of that nation, is $3^{\circ} 53'$ S. and thus it stands in the new French map; and lies 33° W. of the observatory at Paris. Its distance from the coast of Brasil is betwixt 60 and 80 leagues; but this is not precisely determined, the French map placing it 60 leagues E. of it, whilst the Portuguese pilots belonging to the transports, and who consequently, should be well acquainted with the passage, judge it to be 80 leagues. By taking a medium betwixt the two, the distance will be 70.

ON the frigates coming to an anchor in the bay, and all our apprehensions dissipated by a certainty that the Portuguese possessed this island, we took in our English colours, and hoisted French; and successively saluted the Portuguese flag, which was answered by all the three forts in the bay. Afterwards an officer of the marquis d'Antin was sent ashore with compliments to the governor, in the name of the captains and masters of the frigates. After a very polite reception, the governor signified to the officer that his duty obliged him to be fully informed what frigates they were, whence they came, and whither they were bound; and that he desired the captains would send him a written account, together with their commissions, invoyances and clearances. And this indispensable demand being complied with, they might depend on all the friendly offices within his power.

power. This was immediately done: and on his part, after an attentive perusal of the several papers, being satisfy'd with their contents, he wrote a very obliging letter to the captains, offering them whatever the island afforded: for besides his own personal disposition to act up to the laws of hospitality towards all who stood in need of succour, he and all the governors of Brasil had express orders in their commissions from their sovereign to shew all manner of friendship to any ships belonging to other states, which might put in to their ports; and likewise to furnish them all equally with whatever they wanted, provided it was not detrimental to his people or vessels, nor give just cause or complaint to any other nation at war. The French captains were not wanting to shew their sense of such humane and prudent expressions; and the generous governor soon shewed they were sincere, by furnishing whatever provisions we required as necessary, ordering a number of Indians to assist us in watering, and the transport to receive on board so much of the cargo of the *Delivrance* as was necessary to lighten her, in order to her being caulked and careen'd, that she might perform the remainder of the voyage with safety and dispatch.

NOTWITHSTANDING all the civility and friendship of the governor in every particular, we were in the same condition in the island, with regard to recreation and amusements, as if we had been at sea; being hardly permitted to go a-shore; the Portuguese from their natural suspicion and jealousy observed their orders with such precise strictness, that to go from the shore to the principal fort where the governor of the island resided, was the only walk allowed: and in this he who went a-shore was attended with three or four soldiers, who never left him, till he returned to the boat, which was immediately ordered to be put off. Guards were placed

in all quarters of the harbour; and on seeing any boat, they immediately ran to the place they supposed she intended to land, in order to accompany the passengers. These disagreeable precautions, however, are to be imputed to the abrupt settlement made on this island by the French East India company, when the Portuguese retired from it; and now thinking it a place of great importance to the French, they preclude them from any acquaintance with the inland parts of the island, least such a knowledge might facilitate the execution of their supposed designs, namely of taking it from the Portuguese, and fortifying themselves in such a manner as not to be easily dislodged.

C H A P. IV.

Voyage from FERNANDO DE NORONA. Engagement with two English privateers.

ON our arrival in the harbour of this island, our first care was to repair the *Delivrance*; but upon examination, her condition was found so bad, that to have entirely compleated her would have occasioned too great a delay. It was therefore thought proper to repair her only so far, as was necessary against the danger and fatigue of being continually at the pump; and accordingly, when we came to sea we found, that instead of repeating that fatiguing operation every half hour, once in an hour was now sufficient.

HAVING taken in the necessary supplies of wood and water, with some calves and hogs, it was determin'd to put to sea with all expedition, in order to retrieve in some measure, the delay which the repairs, however slight, of the *Delivrance* had occasioned.

June

June the 10th at ten in the morning the frigates got under sail, and steered N. $\frac{1}{4}$ easterly till June the 18th, when they were in the latitude of 8 deg. 12 min. N. and 43 deg. 27 min. E. of Conception, having cross'd the line on the 12th under the meridian of 42 deg. 45 min. E. of that city, and 32 deg. 47 min. W. of Paris. We had fresh gales at S. till we came into the latitude of 6 deg. N. where the wind abated and became variable; sometimes N. N. E. and N. E.; and at other times E. S. E. and E. N. E. but never blowing with any strength till the 8th of July, when, having steered N. E. and N. we found ourselves in 34 deg. 31 min N. lat and 31 deg. 23 min. E. of Conception, where what little wind we had shifted to S. S. W. and S. W. From the 8th to the 31st of July we steered N. E. and N. E. $\frac{1}{4}$ northerly, except three days, when we ran E. N. E. and one day N. W. $\frac{1}{4}$ northerly, being forced to alter our true course by the winds, which veered to the N. and N. E.

On the 2d day after leaving the island, we lost sight of all birds of any kind, but saw great numbers of flying fish and bonitos. On the 13th of June in a clear night and settled breeze at S. E. without the least appearance of any disagreeable change, we were surpriz'd by a storm of wind and rain, that all we could do was to bear up under our courses. It was indeed too violent to last; and accordingly about an hour after the weather cleared up. On the 15th we began again to see Tunny fish in large shoals; and the 16th it was calm intermix'd with gentle breezes and showers, till the 17th. The same weather continued the 18th and 19th, with now and then thick clouds in the horizon, which we observed afterwards to go off in violent showers.

On the 20th of June in the lat. of 9 deg 28 min. N. we saw a bird, the only one which had appeared since our departure from the island. It was something

larger than the Pardela, of a dark brown colour, except the breast and lower parts of the body, and the wings remarkably long. On the 22d squalls and showers. On the 24th we saw great numbers of Tunnies, flying fish and cavallas, a fish not unlike a mackrel; and a bird of the same kind as that we saw on the 21st.

On the 27th, being in 17 deg. 57 min. N lat. the sea was covered with a kind of weed called Sargaso, which pickled, is by many thought equal to Samphire: and along this verdant surface our course continued till the 7th of July, that is, till we were in the lat. of 33 deg. 31 min. when little of it was to be seen. Whereas for some days before the whole ocean within sight was, as it were, covered with it. During this time we also saw some birds; but particularly in the afternoon of the 29th of June, and on the 30th in the morning. Some of these were of a middling size and of a dark brown colour; also some black Rabiahorcados; and on the morning of the last day we also saw several rabijuncos. On the 1st of July we again had sight of the abovementioned brown birds, but without any of the other two species: and on the 3d, being in 27 deg. 34 min. latitude, and 32 deg. 27 min. E. of Conception, we saw no kind of large fish, tho' abundance of the flying fish.

On the 8th being in 34 deg. 31 min. latitude, we again had sight of the Dorados; and likewise saw a middle-sized bird all black, which for a long time continued hovering about the ships. On the 9th in the evening, we were surprized with the appearance of a small whale; and on the 10th in the morning, being in the latitude 36 deg. 57 min. and 32 deg. 6 min. E. of Conception, we saw several birds of a middling size, with long and broad wings, the neck, head and tail black, and the other parts of the body white.

ON the 10th, being in 36 deg. 57 min. latitude, and 32 deg. 6. min. east. of Conception, by my reckoning, according to which, and likewise in the Dutch and common French chart, the island of Flores, one of the Azores, lay E. N. E. 2 degrees N. distance 112 leagues. In the French chart are set down some islands, which, as being of later discovery, do not occur in the Dutch: among these is Santa Ana bearing westward five leagues; but by the new French chart, the island of Flores lay E. N. E. 5 deg. easterly and at the distance of 167 leagues. All this morning we had a cockling sea coming from the N. W. and by W. which we conjectured might proceed from the proximity of the island of Santa Ana, as by our reckoning it must have been very near us.

ON the 17th being in 41 deg. 49 min. latitude, and 36 deg. 48 min. E. of Conception, we were amused with the sight of vast flights of birds, of a middling bigness, and of a brown colour intermixed with black, resembling on the whole the Cormorant. On the 18th we also saw great numbers of the same birds; but from the 19th when we were in 42 deg. 53 min. latitude, and 39 deg. 23 min. E. of Conception, they gradually decreased so that we saw very few of them.

FROM the time of our leaving the island of Fernando de Norona, till we reach'd the equinoctial, the S. latitude by observation every day exceeded that by account ten or eleven minutes, that is, the ship did not in reality, make so much way as she seemed to do by the log-line. But after passing the equator, the latitude by observation continued still to exceed that of the reckoning taken from the log-line: and as we stood directly north, it appeared that the ship's real way exceeded the distance measured; whence this corollary may be deduced, that in the southern hemisphere near the equinoctial, the
waters

waters tend southward ; and that, on the contrary, in the northern hemisphere the current runs northward ; which agrees with the accounts given of those, who in the voyages to the East Indies have several times had occasion to cross the line. Till the 24th of June the course of the waters continued northward 10 or 11 min. a day ; but when we reached 14 deg. 22 min. the latitude by observation began to correspond with that by account.

THE differences between the latitudes by account and observation can only be attributed to the course of the water in the two hemispheres ; and not to any defect in the measurement by the log-line : for were that the case, how can it be reconciled with this known circumstance, that the way of the ship whilst in the southern hemisphere was in reality less than it appeared by the log-line : and on coming into the northern hemisphere, it was quite the reverse. As little can it be charged on any defect in the instruments ; for besides the daily agreement of all concerning the difference, when we were got out of these opposite courses of the water, the latitude by observation agreed with that by account. The preceding reasons also shew, that the person who tended the log line was not careless ; for if any error had been committed here, the difference would have continued, the management of it having on all occasions been entrusted to the same person, who besides his sobriety and attention, was a complete artist. But the above cause is further evident from the continual uniformity of the distance, never exceeding ten or twelve minutes ; or decreasing betwixt ten and twelve minutes every day : and that if on any day the latitude had not been observed, on the day following the difference was found double ; a circumstance that not only proves the reality of the currents here, but likewise confirms what we have said in chapter 2d, concerning those in our passage from Conception to this island,

island, exclusive of those which will be mentioned in the sequel.

ON the 7th of June, being in 33 deg. 31 min. latitude, and 31 deg. 37 min. east of the meridian of Conception, we suddenly felt a strong motion of a current, which the more surpriz'd us, as we perceived nothing of that kind the day before, tho' in the same latitude. However, we were confirmed that we were not mistaken by our reckoning the following days, till the 11th, the latitude by observation daily exceeding by 13 or 15 min. that by account; but on the eleventh they again agreed. On the 12th in 39 deg. 44 min. latitude, that by observation again proved different to that by account, the former being less than the latter, by 13 min. And on the 13th the difference continued to be the same. Thus the course of the current continued lessening the ship's way, by carrying us southward till the 15th and 16th, when the difference became greater, but in an opposite direction; that is, the currents carried us northward. On the 17th they continued the same course, but on the 18th, we found 27 min. difference; having suddenly entered into waters of a different course, that is, they again carried us southward. Had this variety of differences been reported only by a single person, doubtless from the strangeness of the phænomenon, it would have been looked upon as a mistake in the observation; but the reality of these dangers does not now admit of any rational doubt. The observations were taken by seven persons, each with a different instrument, one of which was a quadrant invented by the celebrated Mr. Hadley, and all agreed in the differences. From the 18th day of the month to the 20th the difference betwixt the latitudes by observation, and that by account, proved to be 40 min. which was near double of that which had appeared in the course of the 18: and on the 20th we were in the latitude of

43 deg. 8 min. and 38 deg. 57 min. E. of the meridian of Conception.

NOTICE has already been taken of the indifferent condition of the Delivrance at our departure from the island of Fernando de Norona. And thus it continued till the 16th, when, whether it proceeded from the working of the ship or any other cause, the water increased so fast that the ship was reduced to that distress, which had been the chief occasion of our putting into the above island, and of our long stay there. On the 20th it increased upon us in such a manner that the pumps were kept continually going the whole night; but on the 21st it suddenly abated to near a fourth part of what it had been the day before; a most seasonable relief to the ship's company spent with a fatigue, which their fears rendered still more painful. We observed that the water continued to decrease from the time of our getting into the sargasso or weeds, so that on the 27th the ship scarce made an eighth part of the water as on the 20th. This happy change could be attributed only to the sargasso suck'd into such seams as were open: and this farther appear'd by several pieces of it thrown out by the pump; besides a considerable quantity of the weed was seen sticking to the outside of the ship's bottom. But on the 29th the water began again to encrease, and soon after abated; in such variations it continued during the whole voyage. And we according to its state, fluctuating betwixt hope and fear.

On the 21st of July, about six in the morning, being in 43 deg. 57 min. latitude, and 39 deg. 44 min. E. of Conception, we discovered two sail within three leagues of us; bearing E. N. E. The rays of the sun had hinder'd us getting sight of them sooner. They stood to the S. W. and our three ships kept on together N. E. without altering their course till seven in the morning, when being within little more than
cannon

cannon-shot of each other, the largest of the two fired a gun with shot, and at the same time both hoisted English colours, our frigates also formed a line, tho' little in a condition for fighting; for besides being weakly mann'd, and the want of arms and ammunition, they had no nettings for securing the men, so that both the quarter deck and fore-castle were exposed.

WE, however, after the enemy had hoisted their colours, continued sailing in a line, but still in our proper courses, till the smallest of the English ships bore down upon us, and fired several shot to oblige us to hoist our colours; on which at half an hour after seven a fire both of great guns and musketry began on both sides; and at eight o'clock the ships were within pistol shot of each other.

THE force of the three French frigates was this, the *Louis Erasme* carried twenty guns; eight on the quarter deck of eight pounders, and the twelve on the fore-castle six pounders, and had betwixt seventy and eighty persons on board seamen, passengers and boys. The *marquis d'Antin* also carried ten guns, on a side, the five aftermost of six pounders, and the five forward of four; and had aboard about fifty or fifty five persons. *La Delivrance* was still smaller than the other two, having only seven four pounders on a side, and all the persons on board did not exceed fifty one.

THE enemy who afterwards proved privateers, were considerably superior in force. The largest of them called the *Prince Frederick*, commanded by captain *James Talbot*, carried thirty guns, twenty four of them being twelve pounders, besides crossbar shots which stuck in our masts and sides, and six six pounders on the quarter deck. The name of the smallest privateer was the *Duke*, captain *Morecock*, had ten guns on a side, and these likewise twelve pounders, besides padereros on both, which did great execution
on

on our rigging. The Prince Frederick to all appearance keeping a continual fire both with the great guns and small arms, could not carry less than two hundred or two hundred and fifty men, and the complement of the Duke from the like circumstances we concluded to be about one hundred and fifty or two hundred.

THE fight was maintain'd with great resolution and alacrity on both sides, though under this considerable disadvantage to the French, that one broad side from the enemy did twice the execution of one from their ships: and as for musketry, with which the English were well furnished, and kept an incessant fire, all that the French could use, was about twelve or fourteen on board each ship, it being present death for any one to shew himself on the forecastle, and a musket was what very few on board knew how to make use of. At length about half an hour after ten the marquis d'Antin, which was in our rear struck to the largest of the enemy, with which she was engaged, after losing her captain, who died encouraging his men with the same vigour that he had begun the action. And however reluctant they who survived were to the surrender, it was now become of absolute necessity, the ship having received so many shot betwixt wind and water, that she was on the point of sinking.

THE captain of the *Delivrance*, which was the headmost ship, seeing one of our company taken, and judging from this diminution of our force, there was still less hope of a successful event, he prudently crowded sail, that whilst the enemy's ships were taken up with their prize, that he might get from them; for no sooner had the marquis d'Antin struck her colours, than the least of the enemy's ships withdrew from the action which she had alternately maintain'd with the other two, in order to secure the prize, whilst the larger was to renew the fight.

It was half an hour after eleven when the *Delivrance* thus began to seek her safety in flight: the *Louis Erasme* could not hesitate to follow her example, but the largest of the English privateers was not long in coming up with her, and by the superiority of their force, and the vigour with which they exerted it, soon laid her under a necessity of surrendering, though not till the worthy captain had been wounded, so that he died the following day. The two privateers being now taken up each with its prize, and the S. E. wind freshening, favoured the escape of the *Delivrance*, which stood N. E. and at four in the evening got quite out of sight both of privateers and prizes.

THE cargoes of the marquis d'Antin and the *Louis Erasme*, thus taken, were valued at three millions of dollars, two in coin, gold and silver, and ingots, or wrought plate. The other consisted in cacao, which was the principal part of her lading; some *Quinquina* and *Vigonia* wool.

CHAP. V.

Voyage of the Delivrance to LOUISBURGH in l'Isle ROYALE or CAPE BRITON, where she was also taken.

THE captain of the *Delivrance*, after this, in all appearance, fortunate escape, consulted with his officers what course was most adviseable to steer. Among them was one who had often been at *Louisburgh* in the island of *Cape Breton*, near *Newfoundland*; and had a perfect knowledge of the situation and nature of the place. He likewise informed us, that in the beginning of the summer, two men of war were every year sent thither, to carry money and troops

troops for that place and Canada; and likewise to protect the cod-fishery:

As this was the constant practice in time of the most profound peace, it was natural to suppose, that in a war with a maritime power, the number of ships would be increased: at least, this precaution had never been omitted in the last war under Lewis XIV, the place being of the utmost importance to France, as the key of Canada, the most secure port for the fishery, and carrying on a very considerable commerce with the islands of St. Domingo and Martinico. These reasons and this course appearing less dangerous than that towards the coast of Spain, determined the captain to pursue what he thought the safest method, and make for Cape Breton: besides, the condition of our ship scarce permitted any choice, as affording little hopes that she ever would be able to reach any port in Spain. We had likewise been informed at Conception, a little before our departure, that a company had been formed in London for fitting out thirty privateers from twenty to thirty guns, and to be stationed so as to intercept all ships coming from the Indies. Though this was in fact a false alarm, the misfortune of meeting the two abovementioned of a force agreeing with the report, gave it to us all the appearance of truth; and we concluded that there must be many more cruising in proper stations nearer the coasts. This opinion was very natural to us, who for above two years had received no other accounts; and after what had happened, it would have seemed an excusable step, to have exposed such a valuable cargo, as that of the *Delivrance*, in such a heavy vessel, as must unquestionably have fallen into the hands of the first enemy that should give her chase. All her force consisted in fourteen four-pounders, and about fifteen muskets; besides nine of our people had been disabled in the last action: and what was still worse, we
had

had little or no powder. Another bad circumstance was, that from the damage the ship had received in the action, she made so much water, that though we began to pump immediately on the conclusion of it, it was midnight before we could free the ship; and every one who had received no hurt in the action, without distinction, voluntarily took his turn in the labour. Weighty as these reasons were, that the captain and his officers might not be charged with taking such an important step of themselves, a representation was also made to the passengers, who all readily approving of it as the best resource in our present exigency, the very same evening our course was altered; and we began to steer for Louisbourg as a port of safety.

The place where the action happened, according to my reckoning and the new French chart, was 96 leagues N.W. 5 degrees westerly from the island of Flores.

After changing our course we steered N.W. one quarter westerly, and W. one quarter northerly, till the 28th, when by observation we found ourselves in the latitude of 46 degrees, 18 minutes, and 23 degrees, 45 minutes east of Conception, the winds generally being S.S.W. and W.S.W. One day only we had them at N.W. and W.N.W. and this was on the 23d after a very violent storm, which began at twelve in the night of the 22d, at E.S.E. whence at six in the morning the wind flew about to the S. and S. one quarter westerly, whilst we lay to under our main-sail; and, when the wind offered, made way under that and a topsail with a reef in both; besides the high seas which such a storm naturally occasioned, we had also fogs and rains.

From the 46th degree we continued steering W: sometimes a little towards the S. or N. endeavouring always to keep that latitude, though sometimes the winds obliged us to alter our course: for though they were generally S.S.W. and S.W. though oftner in

the first than the second ; they sometimes came about to the N. E. E. and S. E. and these changes were always attended with hurricanes.

ON the 5th of August we found ourselves in the latitude of 45° , $14'$, and 24° , $16'$ E. of the meridian of Conception ; the wind, which till six in the evening of the foregoing day had been S. now became calm ; and at two in the morning, we had it at W. N. W. and N. W. from whence it veered N. about to the E. and from thence again returned back to the N. E. freshening more than it had done before. Afterwards it began to blow in squalls, and again shifted to the N. On the 6th, at eight in the evening, it veered to the E. and two hours after to E. S. E. where it continued till six in the morning of the seventh, when it settled in the S. E. and abated ; tho' its greatest force here had never been such as to render it necessary for us to lay to, as had been the case before, and was again afterwards.

ON the 7th, being in the latitude of 45° , $17'$, and the wind at S. at two in the afternoon it suddenly flew about to the W. where its extreme violence obliged us to furl every sail, and lie to. We had also here a very high sea to encounter with, but in two hours our apprehensions were relieved, the wind shifting to the N. W. and abating considerably ; and two hours after it again returned to the N. whence at ten at night it veered to W. one quarter southerly, and became so moderate that we could carry our top-sails. Here it settled, and the weather became fair and easy ; but these variations, by forcing us out of our true course, were of great detriment to us, as will be seen in the sequel.

ON the 10th, being in the latitude of 45° , $14'$, and 17° , $25'$ E. of Conception, with the wind at S. it began to blow, and at five in the morning we were obliged to take in all the reefs in our top sails ; it
then

then shifted to the S. S. W. with a prodigious sea ; so that at three in the afternoon we were obliged to lie to under a reefed mainfail. At ten o'clock it shifted to the S. W. and S. W. one quarter westerly ; when abating a little on the 11th, at six in the morning, we made way under our foresail and top-sails all reef'd ; and the wind continued for some time in this rhomb.

THE usual inclination of the wind in these seas, and common to all parts of the northern hemisphere, is to follow the sun from E. to S. S. S. W. and N. something like what has been observed in the chapters which treat of the South-sea. And thus when it has blown a storm, instead of continuing its inclination, it returns ; and tho' with all the appearance of a calm, within a day or two it rises again with redoubled fury. This is a difficulty not easily solved, for among the great number of persons, otherwise doubtless respectable for their eminent talents, who have applied themselves to investigate the causes and origin of winds, not one of them has accounted for their irregularities and gradations, both with regard to their variations, impulse, and direction.

IN this passage to the Newfoundland seas, storms are very frequent, yet they differ according to the seasons of the year. We have already seen that they most usually happen when the wind is at S. and tho' the northern winds are very strong, yet they do not equal those of the former quarters. On attending to this particular, a certain conformity will be found betwixt the two opposite hemispheres ; as in each, besides the circulation of the winds, the storms happen when they blow from that part of the pole opposite to that which is nearest each hemisphere. In the south sea the storms generally rise from the N. and W. winds ; and in that of the N. they are occasioned by the S. and W. winds.

THE hard gales which are met with in summer in the passage to Newfoundland, are of no long continuance, like the two with which we were surprized in this voyage; but they are more sudden and violent than in winter; for from their beginning to the very height of their violence is scarce half an hour; and though in this season they are not very frequent, yet it never passes without some: but in winter they continue three or four days successively, and with no small force. These of both seasons are more or less accompanied with fogs and showers.

JULY the 31st, according to my account, at eight in the morning, being in 45 degrees, 57 minutes latitude, and 27 degrees, 3 minutes E. of Conception, we found by the whitish tinge of the water, that we had entered on the bank; and on sounding found 55 fathom, and the bottom, sand mixed with small shells. On comparing the sounding and the bottom with the new French map, my reckoning of the course was six or seven leagues too forward; that is, we had that distance to sail before we came to a bottom of that kind. On the evening we tack'd with an intent of lessening our latitude, as well to keep at a distance from Placentia, as to avoid some shoals lying at the west end of the bank in the latitude of 46 deg. and on this account we again stood from it.

ON the 2d of August being in the latitude of 45 deg. 30 min. 30 sec. 27 deg. 2 min. E. of Conception, we sounded, and found 70 fathom water, and the bottom rocky. We continued our soundings every day, and found the bottom as specified in the following table:

Days

Days	Latitude	Long. from Merid. of Conception	Fathom of Water.	Bottom	Colour of the Water.
4 Aug.	45 14	24 38	40	small gravel	green
5	45 12	23 50	48	brown gravel	whitish
6	45 8	22 56	48	stony	sea blue
6	45 9	22 30	50	ditto	ditto
6	45 11	21 51	55	small gravel and sand of different colours	} light blue
7	45 13	19 53	35	coarse white sand and small gravel	
8	45 23	20 12	45	coarse sand of all co- lours and small gravel	} whitish green
8	45 26	20 7	no bottom at 80 fathom		
9	45 20	19 12	ditto		light blue
10	45 16	17 14	45	stony	} of a blue ish green
	45 19	16 32	no bottom at 80 fathom		

JULY the 27th, in the latitude of 45 deg. 54. min. and 32 deg. 6 min. E. of Conception, we saw some birds as it were sporting on the water. The size of them was something less than a wood-pigeon, and all over black except the tail which was white. They who are conversant in these voyages say, that they are seen at a great distance from the bank; and thus we found it, being obliged to lessen our longitude 5 deg. to return to our first soundings. We also saw two birds of that kind called Penguins, of which there are great numbers on the bank: and tho' in the common opinion these birds never fly to any great distance from it, we found it otherwise. These penguins are of the bigness and shape of a goose, also with little or no tail. They fly against the course of the water; their plumage on their breast and belly is white, but their back, the upper part of their wings and all their neck brown. As fish is their whole subsistence, they dart down into the water with prodigious celerity, and continue a long time under it in pursuit of their prey.

On the 30th, in the latitude of 45 deg. 54 min. and 28 deg. deg. 43 min. E. of Conception, we again saw

some of the same birds as on the 27th, besides some small whales near the ship. During the whole remainder of the voyage we had always sight of these kind of birds, and another very nearly resembling the Penguin; but the bill was black, very large, and of a square form. Both kinds swarm on the bank, but without it they are not so frequent. On our approach to the bank we also saw great numbers of cavallas, which abound all along the coasts. We likewise saw some shoals of tunny fish. About the edge of the bank there is always a great swell: but on coming within the soundings, even in a hard gale of wind, tho' attended with a high sea, it does not continue any longer than the wind; the one subsiding as the other abates.

IF I have been so very circumstantial in my account of the voyage from Conception, and given a detail not only of the winds and times of the year, but also of the agitation of the sea, in storms and hard gales, the course, the colour of the water, and the signs of birds and fishes, I hope it will be attributed to my zeal for the improvement of navigation, and my desire that mariners who are strangers to this voyage, might be acquainted with these things which are certainly of real utility; as by thus acquiring a knowledge of the latitudes and longitudes, which are punctually set down at every sign or an extraordinary occurrence, they might be acquainted with the particulars of every part; and consequently the better enabled to take the most proper measures; and that nothing may be wanting for their information in the particulars of this last voyage, I shall postpone the account of our misfortune at Louisbourg, to insert here

A table of variations of the needle as observed in our passage, from Fernando de Norona, to Cape Breton, according to the latitudes, and longitudes
from

from the island of Conception, in which the observations were made.

Days of the Month.	Lat. D. M.	Long. D. M.	Variations D. M.	Time of making Observation.
June 11	1 24 S.	42 35	2 39 E.	Evening.
12	0 16 N.	42 50	2 43 E.	Ditto.
17	7 14	43 32	0 38 W.	Ditto.
19	8 17	43 21	1 40	Morning.
27	18 16	35 46	1 15	Ditto.
July 3	27 11	32 34	0 10	Ditto.
3	27 58	32 24	1 20	Evening.
4	28 47	32 17	1 20	Morning.
6	32 44	31 58	6 50	Evening.
7	33 16	31 44	6 55	Morning.
9	35 47	31 46	7 0	Evening.
12	40 10	32 58	8 5	Morning.
13	40 22	34 17	10 55	Evening.
17	41 35	36 16	11 0	Morning.
20	43 24	38 41	11 0	Evening.
25	45 7	34 29	15 50	Ditto.
29	46 7	28 10	14 30	Ditto.
30	45 59	28 16	13 10	Morning.
Aug. 5	45 12	23 41	20 15	Evening.
8	45 22	20 12	13 20	Morning.
8	45 27	19 45	13 0	Evening.
9	45 22	18 39	15 15	Morning.

On the 24th of July, in the latitude of 44 deg. 52 min. by observation, which was 25 min. less than that by account, and according to my estimate 36 deg. 6 min. east of Conception ; no observation had been taken since the 20th. But we found that the currents had in each days sailing carried the ship 6 min. S. On the 25th in the latitude of 45 deg. 6 min. and 34 deg. 47 min. east of the same meridian, we again found the latitude by observation to be 8 min. less than that by account. But afterwards they agreed till we had pass'd the bank, when on the 12th of August, 16 deg. 2 min. east of Conception, our latitude by observation, was 45 deg. 58 min. an excess of just 30 min. beyond that by the reckoning ; and this great difference had commenced on the 9th,

when we were in 45 deg. 22 min. latitude, and 19 deg. 1 min. east of Conception.

FROM this difference it is manifest that, on the west side of the bank, betwixt it and Cape Breton, that is under the meridian of Placentia, the currents set to the northward, agreeably to the opinion of the pilots in those seas, who all declare that the sea sets into the gulph of Canada by the streight betwixt cape Roze, the most western point of the island of Newfoundland, and the north cape in the isle royale; and discharges itself by the streight of Belisle, formed by the main land and the north point of Newfoundland: and we sensibly found on making the coast, that the waters carried the ship northward.

ON the 12th of August in the morning, we saw a great number of those kinds of sea-fowl which always keep near the shore, and particularly several gulls, from which with the course we had steered from the time of our coming into soundings on the 2d of August, we concluded ourselves to be not far from land, having also diminished our longitude exactly 11 deg. In this conjecture we were soon confirmed by weeds, pieces of wood and boughs floating on the water, and at twelve o'clock we actually made the land, tho' at a great distance. At four o'clock in the afternoon we had a plain sight of it; but being low and level we were obliged to shorten sail and lie to, till the following day, when at half an hour after six in the morning, we saw the island of Es-catari, which lies about five leagues north of Louisburgh: but the wind continuing S. W. and the current setting the ship northward, we were obliged to work up towards the harbour.

ON the 13th, at six in the morning, we saw a brigantine plying along the coast for Louisbourg; the *Delivrance* on this hoisted a French ensign, which was answered by the other, firing two or three guns. This gave us no manner of uneasiness,

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concluding that the brigantine suspecting some deceit in our colours, had fired those guns as a warning to the fishing barks without, to get into the harbour; and they put the same construction on this firing, immediately shewing the greatest hurry in making for a place of safety. An hour afterwards, being near eight o'clock, we saw coming out of Louisburgh two men of war, which we immediately took for ships belonging to a French squadron station'd there for the security of that important place, and that they had come out on the signal from the brigantine, that a ship had appeared in sight, lest it might be some Boston privateer, with a design on the fishery. Thus we were under no manner of anxiety, especially as they came out with French colours, and one of them had a pennant. All the forts of Louisbourg, as well as all the ships in the harbour, which we could now plainly distinguish, wore the like disguise. Here I must refer to the reader's imagination the complacency and joy which swell'd every heart, imagining that we now saw the end of all our fears and disasters; a place of safe repose after a voyage of danger and fatigue. Then let the reader be pleased to think what an edge the melancholy disappointment gave to our astonishment and dejection, when amidst the indulgence of such pleasing ideas, we found our hopes destroyed, and all our visionary schemes of delight, ending in the real miseries of captivity.

We were now so near the two ships which were coming out of the harbour, that orders had been given for hoisting the boat out to go with an officer on board that which seemed to be the commodore; and we unloaded our guns of their shot to salute them. The smallest which carried fifty guns leading the way, came along side of us; then indeed from what we both heard and saw, our fatal disappointment became too evident, and our misfortune

was immediately confirmed to us, the ship hoisting its national colours, and firing into us carried away the foretop-sail halliards, that the sail drop'd down, and at the same time the larger ship came up on the star-board side of us. Betwixt two such enemies no reasonable person will offer to charge the captain of the *Delivrance* with cowardice, that without offering any resistance, which would have been a wild temerity, he immediately struck his colours. The boat from the smallest ship came aboard and took possession of us, having as she advanced been hoisted out for that purpose: and thus after firing only one gun, return'd into the harbour with a very rich prize.

THIS accident gave a total change to our flattering expectations; brought ruin on our fortunes: overthrew all our ideas of the use and improvement of them. Our joy was stifled in its birth; and instead of our anticipated repose, we entered on a new scene of troubles and distress, aggravated by the loss of our substance and liberty, where we had promis'd ourselves recreation and enjoyment.

THESE two English men of war were the *Sunderland*, captain John Brett, of sixty guns, and the *Chester*, captain Philip Durell, of fifty: and it was to the latter that the *Delivrance* struck. The officers, captain Durell, for their better accommodation, sent to the house which had been assigned him, when, pursuant to the articles of capitulation at the taking of *Louifbourg*, the inhabitants were sent back to France. This house he made but little use of, living continually aboard the ship.

As to my papers, on our departure from *Fernando de Norona*, I had made a packet of all the plans and relations which might have been of service to the enemy; also the vice-roy's letters and other papers committed to my care, that on an exigency they might be ready to be sunk. I had also desired of the captain, the supercargo and other officers, that in
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case it was my fate suddenly to fall in the action, they would do me that kind office. Accordingly when I saw that there was no possibility either of opposing or getting clear of the enemy, I threw them into the water, with some bullets fasten'd to them, to disappoint the alertness of the enemy, who otherwise would unquestionably have been for laying hold of them; but my papers relating to the mensuration of the degrees of the meridian, together with the physical and astronomical observations and historical narratives, I kept by me, the contents being of universal concern, and no detriment could result from the enemy's knowledge of them: but as among men who seem'd to mind nothing but what was silver or gold, they would have ran a great risk of being abused or confounded among a multitude of others, I thought proper to acquaint the captains on what service I had been, and as those papers tended to the improvement of navigation, took the liberty of recommending them to their favour: upon which, after having looked on them with some attention, they laid them aside, and carried them afterwards to the commander of the squadron, with whom they remain'd, till, together with myself, they were sent to England.

CHAP. VI.

Don GEORGE JUAN's Voyage from LA CONCEPTION to GUARICO in the Island of SAN DOMINGO; and from thence to BREST in FRANCE, together with his return to MADRID.

THE frigate la Lys, having on the 5th of February, parted company from the three others, on account of her making six inches water every hour,

hour, which would naturally increase by the working of the ship, steered directly for Valparaíso, where making all possible dispatch in careening and watering, on the 1st of March she was ready to put to sea. The winds, as is usual at that season, being at S. and S.W. the *Lys* was obliged to stand to the northward of the island of Juan Fernandes; and drive till she was in the latitude of 32 deg. 18. min. where she fell in with a wind at S. E. which carried her to the latitude of 35 deg. and 11 deg. W. of the meridian of Valparaíso; here it shifted to the S. W. and thence along the N. W. quarter to the N. in which time the *Lys* only got into the latitude of 36° 30' being the 17th day of the month. Here the wind veered to the S. and S. W. blowing very hard, which caused such a sea that they were obliged to lie to under their main-sail. On the 18th, tho' the violence of the wind abated, it continued in the same point: afterwards it changed to the W. and N. W. where it continued till the ship came into 40° 30' latitude, still keeping the same longitude of 11°. Here she met with a second hard gale at south, which they weathered in the same manner, till it abated, shifting immediately to the S.W. west, and N.W.

ON the 25th, in the latitude of 46° they met with a storm at W. which obliged them to lie to under a reefed main-sail. After its greatest violence was spent, till the fourth of April, when they found themselves in 58° latitude and 1 E. long. from Valparaíso, the first meridian for the course of the voyage, the wind shifted from S. to S.W. W. and N. varying also in its force; and the ship carrying sail accordingly.

ON the 10th in the lat. of 55 and 18° east of Valparaíso, they were surprized with a hard gale of wind at S. and S. E.; which obliged them to run under their courses. The force of the wind indeed was not so great as in the two gales beforementioned;

tioned ; but was much more troublesome, being attended with very thick snow, and the cold intense. The wind abating shifted to the S.W.W. and N.W. whilst the ship passing east of Staten land, on the 26th was in the lat. of 34° and long. 32 and $30'$. Here they fell in with winds at E. and S.E. which indeed are the brisas or general winds.

THE slow progress of the voyage, and the heaviness of the frigate, which even in the most favourable weather, never went above seven miles an hour, gave room to apprehend, that it would be impossible to reach the coast of Spain, without putting in to some harbour for a fresh supply of provisions ; the captain therefore represented to the supercargo, that no place could be more proper for such a purpose than Monte-Video, being a Spanish port ; and that if they passed it, they should be obliged to make use of one belonging to some foreign power. But he, conformably to the precise order of the register against putting into any harbour, unless on the coast of Spain, could not be prevailed upon to comply with the captain's proposal : and accordingly the course was pursued without alteration.

THE winds continued at S. E. E. sometimes at S. and S.W. with heavy rains, thunder and lightning, till the frigate came into 23° of lat. and 39 of longitude.

ON the 12th of May, at one in the morning, they discovered a small frigate to leeward ; and on the 19th being in $10^{\circ} 30'$ S. latitude and 39 east longitude, saw three large ships : but both sides continued their respective course, without making any motion to avoid or approach each other.

ON the 27th they crossed the line, 44° east of Valparaiso, or $30^{\circ} 30'$ W. of Paris. As these parts abound in sharks, they caught several, and one of them, after opening it and taking out its intrails, heart and lungs, they threw it again into the water ; and it
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being calm they saw it swim near the frigate above a quarter of an hour, till floating out of sight they could not see the death of the creature. The heart also of this and many others on which the same experiment was tried, was observed to have a motion on board the ship for above a quarter of an hour.

ON the first of June, the frigate was in $4^{\circ} 30'$ N. lat. the wind N. E. and S. E.; and sometimes at S. and S. W. with heavy rains; but now the provisions, and particularly water growing short, the captain, with the approbation of his officers and passengers, determined to put in at Martinico, and accordingly the course was directed thither.

ON the 11th in the morning, being in the latitude of $9^{\circ} 30'$, and 39° east of Valparaiso, they had sight of three large ships which continued their course without standing for the frigate; and as their courses were directly opposite, they soon lost sight of each other.

ON the 21st at night, they had a short squall rather of rain than wind, but the night being dark, they saw at the top-gallant-mast head, the meteor called by the sailors San Telmo, which lasted six hours. Some imagine this meteor to be a sign of fair weather; but this opinion is as little to be relied on as many others adopted without reflection, and justly called vulgar errors: it is only a natural phænomenon, more particularly seen in nitrous and damp places of the earth, in church yards and the like, and on the sea it proceeds from the same cause; and tho' it most commonly makes its appearance in stormy weather, the agitation of the waves sending forth a greater quantity of nitrous particles, and being more copiously carried up to a greater height, by the force of the winds, the luminous matter settles at the extremity of the masts or yards by a small part of it, whilst the remainder has the appearance of a flame
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in the air: yet it is not very uncommon to see this meteor in fair easy weather: and this was the case here, it being quite calm; and in the *Delivrance* on the 9th of August, at half an hour after one in the morning, and in $28^{\circ}40'$ S. lat. we saw one of these kinds of lights, and on the same part of the mast; but ours only lasted an hour, the wind at that time was but faint; and this also had been preceded by hard violent showers attended with some wind; and the atmosphere every where covered with a thick cloud. In both instances no tempest happened before or soon after; consequently they concurred to confute and explode the false notions of sailors, who are possessed with a belief of certain consequences being presaged by these lights, according to their situation, the part of the sea and the time; and may likewise undeceive those, who too easily swimming with the stream of vulgar opinions, are fond of turning the fortuitous effects and products of nature into ominous mysteries.

ON the 15th, in the long. of $13^{\circ}30'$ they saw great numbers of birds, which in their opinion indicated that land was not far off, and accordingly lay to all that night, and the following: but fearing that some English privateers might be cruising to windward of Martinico, in order to avoid them the *Lys* steered for the island of Tobago, intending to go directly from thence to Martinico. On the 28th the colour of the water become totally changed, so as to resemble that of a turbid river; which they attributed to the issue of the Oronoco, tho' the mouth of that river is betwixt sixty and seventy leagues distant; lying to in the night they sounded and found sixty fathom water, and a muddy bottom.

ON the 29th, at half an hour after seven in the morning, they made the island of Tobago lying westward: and at noon saw the little island of San Gil, distant about two leagues from the N.E. from the former:

former: it bore S. three leagues and a half or four leagues off: and the latitude observed at the same hour, was $11^{\circ} 36'$. According to the observations of longitude taken at Valparaíso and Martinico, deducting from them that of the island of Tobago, the error in Don George Juan's estimate was only thirty five leagues, which may rather be termed an inaccuracy, being abundantly sufficient for, or at least, it was of a sufficient justness in a voyage of such a length; and from it I conclude that they met with no currents about Cape Horn; tho' not above a month before, when the *Delivrance* sailed round the cape, we found them very strong; and consequently they must soon after cease. The same change was observable in the weather, and this partly occasioned that of the currents, for tho' the wind was at S. E. during that part of our voyage, yet it was not constantly there, nor had we any of those hard gales which the *Lys* met with: an evident proof that those winds already prevail'd there; and thus check'd the course of the waters, keeping them in their eastern situation.

FROM the island of Tobago, they continued their course to Martinico, and in order to this steered all the night of the 20th betwixt the island of Barbadoes and St. Vincent. On the 30th, when they imagined themselves betwixt those islands, having steered N. $\frac{1}{4}$ northerly, they had no sight of any land. On the 1st of July they were in $14^{\circ} 30'$ lat. and by estimate a degree W. of Tobago: and thus the frigate should have been not far from the island and to windward of Martinico; but they still were out of sight of all land. So great a difference in the short time of two days sail was conjectured to proceed from currents; but the greatest perplexity was to determine whether they set to the east or west. This doubt, however, was removed by considering that it was impossible they could have passed thro' the knot
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of islands, from Granada to Martinico, without seeing at least one of them, even if it had been in the night time, as besides their magnitude, the great concern they were under of meeting the enemy, caused them to keep a very careful look-out. It was therefore concluded that the frigate could not be to the west of Martinico, but that the currents had drove her to the eastward. Accordingly they steered S. W. $\frac{1}{4}$ westerly, in order to fall in with it; and after sailing thus thirty leagues without making any land, other reflections arose, tho' still with some apprehension that they were to the west of Martinico; and now the course was altered to N. without knowing the place where the ship actually was, in order to avoid the danger that if she was on the west side, by steering as the day before she would fall to leeward of the harbours of Puerto-Rico or St. Domingo; and thus find it extremely difficult to reach any port. The wind was at E. N. E. and keeping as close to it as possible, on the fourth at half an hour after three in the afternoon, they made the middle part of the island of Puerto-Rico. This was a transporting sight to all, as having before their eyes a secure and plentiful port: and having happily escaped the dangers of the granadillas, a knot of islands where the greatest channel is but three or four leagues broad, the currents having very providentially carried the ship thro' the midst of them, clear of the rocks, which on both sides have proved fatal to many vessels: and they had not so much as any sight of land. By don George Juan's estimate he found that they might when they steer'd betwixt the islands of Barbadoes and St. Vincent, the currents had carried them almost forty two leagues to the west: and tho' they all very well knew that the course of the waters in that part of the neighbourhood of Martinico sets westward, they were at at a loss to conceive how they had passed betwixt

those islands without having sight of any one, they lying so near one another, the night being clear, and every one keeping a good look out.

ON the night of the 4th day, they sometimes lay to, and sometimes made an easy sail, in order to get into the channel betwixt the islands of Puerto-Rico and St. Domingo, intending for Guarico, otherwise called cape Francois. On the 5th at six in the morning, the S.W. point of the island of Puerto-Rico bore N. at about four leagues distance: and standing towards it till within the distance of only two leagues, they could very plainly see the bottom, which was stony; and on sounding found seven fathom water. On this they tack'd to the W. and continuing in this direction about two hours, they had always the same depth of seven fathom, but coming into twenty they returned to their former course.

AT eleven in the forenoon they discovered to leeward two large ships: and apprehending they might belong to the enemy, the frigate tack'd: on which they also did the same, and crowded sail. At noon the latitude by observation, was $8^{\circ} 7'$. And the island of Desecheo bore N. $\frac{1}{4}$ westerly, distant five leagues. The two privateers, for such it is believed they were, lay becalmed; and this enabled the Lys to keep at the same distance as when she first discovered them; and the wind freshning to the N. about sun set, she stood E.N.E. in order to get close to the shore, and thus avoid the two supposed privateers, determined however to make a stout resistance, if they should be obliged to come to that extremity. Afterwards the wind shifted to E.N.E. and the privateers continuing S.W. the Lys steered northward and weathered the island of Desecheo about two leagues. The wind afterwards freshen'd, and at eleven at night the Lys spread all the canvas possible, steering N.W. and by the 6th in the morning, had neither sight of the land nor the privateers.

ON the 7th at six in the morning they made old cape

cape Francois five leagues distance; they kept in with the coast, and at noon by observation found the latitude $19^{\circ} 55'$ from which they concluded that of the cape to be about $19^{\circ} 40'$, and tho' the land which projects into the sea be low, the inland parts appear very mountainous.

ON the 8th at six in the morning, cape la Grange bore S. distant five leagues; and by noon the frigate being within three leagues of cape Francois harbour, lay to with a signal for a pilot, who being come aboard, carried the Lys into the harbour, where she anchor'd at two in the afternoon, in eight fathom water and a muddy bottom; about a quarter of a league distant from the town.

VARIATIONS of the needle observed during the whole course of the voyage, the longitude being taken from the meridian of Valparaíso.

Latitude.		Longitude		Variations.	
D.	M.	D.	M.	D.	M.
48	45 South	10	30 West	14	30 E.
57	15	9	30 East	24	30
49	30	23	30	19	0
40	0	27	30	14	0
38	15	29	0	12	30
37	15	30	0	12	0
36	15	30	45	11	0
35	0	31	40	10	30
33	25	33	30	9	0
27	0	36	15	4	0
22	15	38	45	2	0
15	30	37	0	1	30
7	30	41	0	0	0
1	15	43	15	2	15 W.
0	0	44	0	3	30
9	30 N.	38	30	1	30
11	15	28	0	1	0
11	15	14	0	4	0 E.
In Cape Francois or Guarico				5	15

THE frigate arrived at the harbour of Guarico in the most favourable time, five men of war being then at Leogan, another harbour in that island belonging to the French, and expected there in order to convoy a fleet of merchantmen to Europe.

GUARICO lies on the N. W. side of the island of Saint Domingo in 19 deg. 45 min. 48 sec. N. lat. and 73 deg. 0 min. 45 sec. W. of the meridian of Paris, according to the observation of Don George Juan taken on the spot: the town is about one third of a league in length, and contains between thirteen and fifteen hundred inhabitants, who are a mixture of Europeans, white creols, negroes, mulattoes and castes; but the last the most numerous. It is but a few years since that all the houses in the town were of wood; but the greatest part of them having been consumed by the unextinguishable rapidity of a fire, the greatest part of them have since been built of stone. They all have only a ground floor, except here and there one with a story. Besides the parish church, which adds an ornament to the square where it stands, here is a college of Jesuits, who have the care of the spiritual concerns of the inhabitants, and discharge it with exemplary affection and sedulity. Indeed at the first settlement of the French here, the priests were capuchins; but the latter being either unable to bear the climate, or not blessed with a sufficient stock of patience to reconcile themselves to it, forsook the churches, on which the Jesuits took charge of them. Here is also a nunnery of Urselines recently founded, and a convent of religious of San Juan de Dios. About three quarters of a league from the town is an hospital, remarkably spacious and beautiful, and which receives all patients who apply for admittance. The parish church, though a handsome building, has not yet recovered the damages it sustain'd at the fire. The college of Jesuits is a most elegant structure in every respect; and
tho'

tho' not large, is sufficient for the conveniency of the fathers generally residing in it, which never exceed six. The nunnery is of greater extent; but by the king's order that the increase of the town may not be obstructed, no young women natives of the country are allow'd to take the veil, so that it can only be considered as a place of genteel and regular education, till they are of age to enter on another state.

THE town lies open without any other defence than a single rampart, two batteries on the sea-side, and a little fort on the point of Puolet for defending the entrance of the harbour, at about two thirds of a league from the town. The regular garrison both for it and the place itself consists partly of French and partly Switzers, besides a numerous and complete body of militia formed of all the inhabitants capable of bearing arms, who are disciplined, and on the same footing as the regulars; jointly with whom, the better to fit them for service on any emergency, they mount guard and perform all other military duties. No country can be better cultivated than the neighbourhood of cape Francois. There is not a spot of ground capable of bearing any thing, but is sown with the most proper species of grain. And by these farms or habitations, as they are generally called, where the servile work is all done by negroes, the people subsist in comfort and even in affluence; being enabled to send vast returns to France for the European commodities brought hither. The grounds belonging to these habitations are laid out in plantations of sugar, indigo, tobacco, and coffee, the joint produce of which is so large that 30,000 tons are annually exported to France; and this vast quantity only from the territories of cape Francois; that it may be conceived how immense the produce wou'd be, were all the country which the French possess in this island cultivated. The contrast of this with the little advantage drawn from the remaining part of it, which tho' even

more fertile, cannot maintain itself, a supply being every year sent for the subsistence of the garrison and ecclesiasticks, strongly shews the advantages accruing to a country from skill and industry.

THE large fleet of ships which frequent the ports of this colony, are so plentifully supplied with European products and manufactures, that at all times, and especially in time of peace, they enjoy a plenty of every thing; excellent bread made of wheat brought from France, wines, distilled liquors and fruits of all kinds. The only article of provisions the inhabitants are obliged to procure from the Spaniards is meat, in return for which they supply them with linen, and other European goods. This commerce is indeed prohibited: but the want being reciprocal, it is carried on with as little secrecy and disguise, as if it had the sanction of the laws. For as no register ship goes from Spain to St. Domingo, the island, for want of a due culture of the lands, being incapable of making any returns, the colony must necessarily perish, unless supplied with goods from the neighbouring plantations.

THERE cannot be a more convincing proof of the vast commerce carried on by France thro' the channel of this colony, than the number of ships which come annually to its different ports: no less than one hundred and sixty small and great, that is, from one hundred and fifty to four or five hundred tons, come to Guarico; and this may serve to give some idea of those destined to Leogane and Petit Guave, and others of less note: all these ships come loaded with goods and provisions, and every one returns with at least 30 or 40000 dollars, in silver or gold. Those only which go from Guarico, exclusive of the cargo which consists of the products of the colony, carry to France every year half a million of dollars; and the same computation, which is not in the least improbable, being made for each
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of the other two chief ports, and as much for all the other smaller ports, the total will be two millions of dollars per annum: and this was precisely the sum carried in the fleet which the *Lys* had the good fortune to join with in her return.

It is easily conceived that not one fourth part of the cargo of so many ships can be consumed in this colony and its dependencies; and consequently it must find a vent among the Spanish settlements, as the Havanna, Caraca's, Santa Martha, Carthagena, Terra Firma, Nicaragua and Honduras. Accordingly Spanish barks put into the little bays and creeks near Guarico, and carry on this clandestine commerce, when by register they are authorized to go to the ports permitted.

THE climate of Guarico is extremely hot, which equally proceeds from the country being every where mountainous, and from its proximity to the line; so that persons who come there only occasionally, on the least excess in diet or other circumstances, seldom escape being attacked by distempers, which in three or four days carry them off; particularly great numbers of the ships crews are swept away after extreme pains, the continual labour these unhappy people are obliged to go through in unloading and loading, taking in water and other necessary services of the ship, exposing them to all the violence of such distempers. The malignant fevers and dysenteries are of the same kind as those so fatal at Porto-bello: and a sufficient account being given of the temperature, the inconveniences accompanying it, and of the products of countries similar to this, I may here be excused from dwelling any farther on those subjects.

THE customs, genius and manners of the people here are no less different from the European French, than those of the Spanish Creoles in this part of America are from the real Spaniards. Here are

some persons of very great fortune, and all acquired from the cultivation and improvement of their lands : and all live in ease and happiness, labouring under very few inconveniences either natural or political ; and this is not the least cause of its daily increase : besides, the people settled here are of themselves laborious, frugal, inventive, and continually exerting themselves in making new improvements ; a turn of mind pregnant with so many advantages, that I wish it could raise a suitable imitation in the Spaniards, that by labour and industry they might attain that prosperity, they see their neighbours the French have done.

THE harbour, tho' open to the east and north winds, is very secure, being partly inclosed by a ridge of rocks which fence it against the impetuosity of the sea. The chief inconveniency is, that when the breeze blows strong, it is extremely difficult and dangerous for boats to land ; for those winds especially at E. N. E. sweep along the whole harbour.

AT the end of the month of August, the French squadron under Mr. Desturbier de l'Étanduer, which had been expected from Leogane, came into the harbour of Cape Francois ; it consisted of the following five ships.

Le Juste, the commodore of	—	70 guns
L'Alcide	———	70
L'Ardent	———	60
Le Caribou	———	50
La Mutine	———	26

SEVERAL merchant ships bound for Europe, took the advantage of sailing with this convoy ; and on the 6th of September, the whole fleet put to sea to the number of fifty three sail, including the men of war, frigates, brigantines, and bilanders. At sun-set Picolet-point bore S. 5° W. distance four leagues and a half. The 7th they steered for Caycos, and not getting sight of these islands during the

the day, it was thought adviseable to lay to all night: but on the 8th at eight in the morning they saw the Cayco-grande, an island of sand three leagues in length, N. and S. but appears the more conspicuous from a few bushes growing on it. At noon its south point bore S. E. $\frac{1}{4}$ southerly distant two leagues and a half. By the latitude they observed, that of the island was set down at $21^{\circ} 35'$ and by the course its longitude determined to be the same with that of cape Francois, unless the current of the waters, which was perceived to set to the northward, may be supposed to have occasion'd some small error.

THE frequent danger which the merchant ships were in of running foul of each other, and the retardment occasioned by such confusion, had induced them to divide themselves, some going to windward and others to leeward of the men of war. But this was a conveniency which they were not long permitted to enjoy, a privateer of the enemy appearing in sight to windward of the fleet: and on this the commodore ordered his squadron to form into a line; and the merchant ships to run to leeward of him, and keep at a proper distance. The currents towards the north continued with greater force on the 10th, 11th, and 12th; and during these days, the winds shifted from E. S. E. to N.

ON the 13th, the fleet coming into lat. $27^{\circ} 30'$ the force of the currents, which had hitherto been observed, now entirely decreased; the privateer did not fail to come in sight of the fleet every morning; and towards night of drawing nearer, with a view of carrying off a prize: but in the day time she kept out of sight. On the 15th in the morning she was seen so near, that the commodore made a signal for two ships to chase. But being a ship very fit for the service she was employed in, the men of war soon lost sight of her. The winds continued at E. and S. E.

S. E. but no more currents were perceivable.

ON the 17th, in 31° of lat. and $3^{\circ} 14'$ E. of the meridian of Cape Francois, the wind shifted to N. and N. N. E. with fresh gales and showers; the fleet stood to the east; but the sea running high, they drove to $28^{\circ} 44'$ lat. as was observed on the 23d, and $8^{\circ} 40'$ long. Here the winds came about to the N. W. and they began to steer N. E. one quarter northerly.

ON the 25th, the wind veered to the S. E. and S. with fair weather; and freshning veered to the S. S. W. S. W. and W. the course of the fleet was N. E. one quarter E. and E. N. E. till the 27th of October, when they made Cape Prior on the coast of Galicia; and at five in the evening Cape Ortegál, bearing S. S. E. distance 7 leagues.

DON GEORGE JUAN, by his reckoning, concluded the difference of longitude betwixt Cape Francois and Cape Prior to be $59^{\circ} 30'$ which is however considerably different from the real longitude: but this I attribute to the strong tendency of the currents eastward at the mouth of the Caycos channel.

WHEN the weather permitted, he continued the observations of the variation of the needle; and taking his meridian from the point of departure, which was Cape Francois, they proved as follows:

N. Latitude.	Longitude from Cape Francois.	Variations.
D. M.	D. M.	D. M.
30 00	2 00	1 30 E.
29 00	6 40	1 00
29 00	9 15	0 00
33 00	11 40	1 30 W.
36 22	18 30	7 00
40 00	26 00	11 00

ON making Cape Ortegál, the course was altered to N. N. E. and on the 31st, at seven in the morning.
the

the Squadron had again sight of land, which proved that of Brest bay; and at three in the afternoon, the whole fleet came to anchor in that harbour.

Don George Juan, being thus landed in France, embraced with pleasure this opportunity of paying his respects to so illustrious a body as the royal academy of sciences; at the same time communicating several particulars relating to our operations in Peru; together with some observations concerning the aberration of light, and its effect on the fixed stars, according to his own accurate observations in the province of Quito. And that celebrated body were pleased to express their esteem of his application and knowledge, by admitting him a corresponding member. Having thus honourably terminated all his business at Paris, he set out for Madrid, in order to lay before the ministry the event and success of his commission; and at the same time solicited that a report of it might be made to his majesty.

CH A P. VII.

Account of the harbour and town of LOUISBOURG; and the taking of it by the ENGLISH; together with some particulars relating to the French fishery, and the trade carried on there.

Louisbourg is in the latitude of $45^{\circ} 50'$ N. lat. and 61° W. of the meridian of Paris. It stands in the S. E. part of l'Isle Royale, and E. of Cape Breton. The town is of a middling size, the houses of wood on a foundation of stone to the height of two yards or two yards and a half from the ground. In some houses the whole ground floor is of stone, and the stories of wood. It is walled, and extremely well fortified with all the modern works:

works: it is only in one place about 100 toises in length, where the wall is discontinued, as indeed unnecessary, this being filled up by the sea, and sufficiently defended by a pallisade. Here the water forms a kind of a large lake; but where the smallest barks cannot come, and the large ships must keep at a considerable distance, by reason of rocks and shoals; besides there are two collateral bastions, which flank this passage to a very great advantage. Within the fort, and in the center of one of its chief bastions, is a strong building with a moat on the side towards the town; and this is called the citadel, though it has neither artillery, nor is of a structure for receiving any; the entrance to it is indeed over a draw bridge, on one side of which is a corps de garde, and advanced centinels on the other. Within this building is the apartment for the governor, the barracks for the garrison, an arsenal, and under the platform of the redoubt, a magazine, always well furnished with military stores. The parish church, or rather chapel which served as such, also stood within this citadel, and without it was another belonging to the hospital of St. Jean de Dieu, which is an elegant and spacious structure all of stone, though founded long since.

THE harbour is large and safe; but the entrance very narrow, being confined by an island called Goat island, on which stands a pretty large fort; and on the opposite side is a very high tower which serves as a light house. The coast on this side within forms a point, which advances towards the shore till it faces the mouth of the harbour. Here also is a large fortification called the royal battery, being that which defends the entrance of the harbour, and the fort on that side. From this fort the coast winds inward, and forms a large bay, which serves as an excellent careening place for vessels of any burden, having a good depth of water, and being in a great measure land-

land-lock'd : and as such the country vessels lay up here in winter. In summer they all come to an anchor before the town at about a quarter of a league distance; though the smaller vessels may come within a cable's length of the shore, where they lie quiet from all winds except the east, which blows right into the harbour's mouth, and causes some agitation; but without any danger to the ships at anchor in it.

BETWIXT the royal battery point and that of the lighthouse, but nearer to the former, lies a sand always above water; but every where else the harbour is clear, so that ships may tack with the greatest safety in going out or coming in when the wind is not fair. In winter, however, this harbour is totally impracticable, being entirely frozen so as to be walked over; that season begins here at the end of November, and lasts till May or June; sometimes the frosts sets in sooner, and are more intense, as in the year 1745; when, by the middle of October, a great part of the harbour was already frozen.

THE inhabitants of Louisbourg, which at that time was the only town in the island, consisted of French families, some Europeans and others Creoles, of the place itself, and from Placentia in the island of Newfoundland, from whence they removed hither on the ceding of that island to the crown of Great Britain. Their principal if not only trade is the cod-fishery, from which also large profits accrued to them, not only on account of the abundance of this fish, but that the neighbouring sea affords the best of any about Newfoundland. The wealth of the inhabitants consisted in their storehouses, some of which were within the fort, and others scattered along the shore, and in their number of fishing barks; and of these more than one inhabitant maintained forty or fifty, which daily went on this fishery, carrying three or four men each, who received a settled salary, but were at the same time obliged to deliver a certain
number

number of standard fish ; so that the cod storehouses never failed of being filled against the time the ships resorted hither from most of the ports of France, laden with provisions and other goods, with which the inhabitants provided themselves in exchange for this fish ; or consigned it to be sold in France on their own account ; likewise vessels from the French colonies of St. Domingo and Martinico, brought sugar, tobacco, coffee, rum, &c. and returned loaded with cod ; and any surplus, after Louisbourg was supplied found a vent in Canada, where the return was made in beavers skins and other kinds of fine furs. Thus Louisbourg, with no other fund than the fishery, carried on a continual and large commerce both with Europe and America. Louisbourg was not, however, the only port where the French vessels loaded with cod, greater numbers going themselves to fish at Newfoundland, off the coast of Petit Norde, and on the bank, as will be more particularly seen in the sequel. Besides the inhabitants of Louisbourg, great numbers of French were settled along the coast of the neighbouring islands, particularly that of St. John, where besides their dwellings they had storehouses and all the appurtenances of a fishery ; which being the most profitable occupation, and the gain less uncertain, very few applied themselves to the cultivation of the country : indeed, its being in winter covered with snow, sometimes to the depth of three or four feet, and even not dissolved till summer was pretty far advanced, husbandry seemed to want a requisite time for the products to attain their proper maturity. Nor could any considerable graziery be followed here, being obliged for the support of the few cattle they had, to lay up a winter's stock of hay, and to keep them housed all that season, till the summer's heat had removed the snow from the pastures, the richness of which, in a great measure, compensated for this dreary season ; and the quick growth of the corn and
other

other products for the length and severity of the winter.

In this and the adjacent islands were a considerable number of inhabitants, born in the country, or on the main land: and what is remarkable, these Indians not only resemble those of Peru in complexion and aspect; there is also a considerable affinity in their manners and customs; the only visible difference is in stature, and this advantage lies visibly on the side of the inhabitants of these northern climates.

THESE natives, whom the French term savages, were not absolutely subjects of the king of France, nor entirely independent of him. They acknowledged him lord of the country, but without any alteration in their way of living; or submitting themselves to his laws; and so far were they from paying any tribute, that they received annually from France a quantity of apparel, gun-powder, and muskets, brandy, and several kinds of tools, in order to keep them quiet and attached to the French interest: and this has also been the politick practice of that crown with regard to the savages of Canada. For the same end priests were sent among them to instruct them in the christian religion, and performing divine service and all the other offices of the church, as baptism, burial, &c. And as the end to be answered was of the highest importance to the French commerce, the persons chosen for these religious expeditions were men of parts, elocution, graceful carriage, and irreproachable lives: and accordingly they behaved with that prudence, condescension, and gentleness towards the Indians under their care, that besides the universal veneration paid to their persons, their converts looked upon them as their fathers; and, with all the tenderness of filial affection, shared with them what they caught in hunting, and the produce of their fields.

L'Isle Royale had only one of these missionaries who

was the Abbe Mallard; one assiduous person being sufficient for the few Indians which inhabit this and the adjacent islands.

THESE Indians, like those of Canada, live in migrating companies; and though christians, and already formed into villages, stay but a small time in one place: accordingly they run up their dwellings very slightly, knowing that they soon shall leave them. Their first business in a new place where they intend to settle some time, is to build a chapel and a dwelling for the priest; afterwards every one builds himself a hut, and here they remain two, three, four, six months, or more, according to the plenty of game in the neighbourhood; for this being their only subsistence, whenever it begins to grow scarce, they remove, and the affectionate priest follows them wherever they go. Many of them come voluntarily to the French settlements, hiring themselves for husbandry or any other laborious work, and at the expiration of the time agreed on, return to their countrymen. Others repair to the French settlements in order to dispose of the skins of the beasts they have killed, and furnish themselves with the necessaries they want. Thus the French live in an entire sociality and repose with them, little apprehensive of any insurrection, or their inclination to any other government, as their own takes care to recommend itself to them by the most ingratiating measures; and the Indians as little harbour any suspicions of a design in the French to erect a tyranny over them, or of making any infringements on that liberty of which they are so fond, or on that indolence to which they are so remarkably addicted, that want alone can rouse them to action.

WHEN the savages have built their huts, their first business is to scour the country, and thus they continue hunting three or four days successively, or till they judge they have a sufficiency to serve them some time; when they return to their huts, where they never fail
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of carrying to the priest the full amount of his quota. The skins of quadrupeds they reserve for sale, having first made the due offering to the priest, who, on the produce of them, supplies his own necessities, and likewise furnishes the chapel; but its ornaments, like the vestments of the priest, are neither remarkable for their number or splendor; their ambulatory life, among other circumstances, scarce admitting of either.

BESIDES Louisbourg, the only fortified harbour of this island, it has other places of good anchorage, on the eastern coast, which terminates at Cape Nord; and on that running southward from E. to W. Of these the best for security and largeness are St. Anne's bay, with a narrow entrance like that of Louisbourg, and Cabaru bay: but these are all uninhabited, the French having confined their views to the fortifying of Louisbourg; as by means of it they hoped to maintain themselves in the possession of the whole island; which being so very woody, that on whatever part the enemy should make a descent, there was no access to it by land; and experience has demonstrated that they thought very justly, it being impossible, without taking the fort, to become masters of the island; nor had this fort ever been taken, if succoured in due time; or if, from the opinion of its being impregnable, proper precautions had not been omitted.

MOST of the trees, of which the thick forests of this island consist, are pines, though not of the same nature with those of Europe. They are of two kinds: one very fit for boards and such like uses; the other, being short and knotty, is used for fuel or making short rafters; and this is called pruche. A decoction of the sprigs, being mixed with a little moiosses, and fermented, makes the ale generally drank at table; the water itself, being of so light and penetrating a nature, that the drinking of it always causes dysenteries: but thus corrected and turned into pruche or spruce beer, is found very wholesome, and of no disagreeable taste.

THUS the French of these parts live in the greatest tranquillity and comfort; and their happiness might have still continued had they themselves not occasioned the interruption of it. For though the two crowns of France and England were at war, and some of the substantial inhabitants here, as well as the English at Boston, had fitted out privateers, the hostilities were never carried beyond the act of privateering, without any thoughts at that time of higher enterprizes. It must be observed, that before the war betwixt the two powers, at the beginning of this century, France was possessed of that peninsula and the lands called Acadia, west of l'Isle Royale: but by the treaty of peace, in which France ceded to the crown of England, Placentia the capital of Newfoundland, and the whole island, this peninsula was also included, a suggestion which the court of England owed to its inhabitants, who being generally protestants, reasonably promised themselves more freedom under a sovereign of their own religion. Many parts of that peninsula belonged to the inhabitants of Louisbourg, who became deprived of them by this treaty: and among them one, concerning which there seems to have been a dispute, whether it was to be included in Acadia or not. But the inhabitants strongly insisting on the affirmative, and the king of England supporting their plea, France was obliged to give up the point, and consent to its being reckoned a part of the peninsula. The owner of this parcel of land, however, who was one of the most considerable inhabitants of Louisbourg, desirous of recovering so valuable a part of his possessions, and availing himself of the present war, laid before the ministry of France his scheme for the conquest of it, without any charge to the king, with the allowance only of a body of troops from the garrison; setting forth the great advantage which would result from it to the French interest in these parts. The ministry entered into his views; a commission was sent him for
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the expedition, accompanied with an order for furnishing him with the number of regulars he had required.

THE country in question little apprehending any invasion, was totally unprovided with the means of defence, so that after little or no resistance, it was taken possession of by the former owner, who, with the body of regulars and adventurers that had attended him, returned in triumph to Louisbourg. In the mean time, the clamours not only of the sufferers, who had been the immediate object of this act of violence, but of all the inhabitants of Acadia, reached the ears of the governor and other powerful persons of Bolton, who, alarmed at the recent example, began to look upon their own welfare as in danger: accordingly they held consultations on the means of preventing further mischief, and taking satisfaction for the late insult: they with reason apprehended, that the French must carry all before them in a country like theirs, every way open, without fortresses or troops; and they imagined that the French, from the facility of its execution, had really formed such a design; and that the first success so easily obtained, would naturally animate that ambitious nation to greater enterprizes. This colony had ever looked upon the neighbourhood of the French as dangerous; and in order to have them at a proper distance, the people of Boston had made repeated solicitations to the court of England, that Acadia might be delivered up to that crown, in order to form a barrier betwixt the other dominions of the two powers.

THE reason that the colony of New-England, and its capital Bolton, is without any fortress or regular troops, is owing to the apprehension of its inhabitants, that they might be brought into subjection to the laws of England and acts of parliament, to the prejudice of those liberties under which they have rose to such a height of prosperity. Thus the whole country lies open without any other defence than

the great number of people it contains. The king of England sends over a governor, but with such a commission as is entirely compatible with its free constitution. This defenceless state of Boston awakened in them a jealousy of farther enterprizes from the French; that in a consultation, at which the governor and the chief persons of the colony assisted, it was resolved that New England could not be safe by land or sea, till the French were dispossess'd of Louisbourg; but that in order to succeed, the design must be conducted with such impenetrably secrecy, that the first notice of it at Louisbourg must be the arrival of the fleet before it; and in Europe the account of its surrender: that the former might be prevented from sending for succours to Canada, and that a force might not be sent from France sufficient either to save or recover it. The governor of New-England at that time was Mr. Shirley, a gentleman of great abilities and merit; and the commodore of the men of war on that coast, was Mr. Peter Warren, a person of the like character, besides his naval accomplishments, and an ardent zeal for the glory of his nation; and who in this affair had the additional incentive of self-interest, being owner of lands and houses to a considerable amount; that he was looked upon as one of the most opulent inhabitants of Boston. These two officers, in conjunction with the chief inhabitants, determined to undertake the siege of Louisbourg, the governor offering to concur in it with a body of land-forces, provisions and other necessaries; whilst the commodore, who had signaliz'd his courage on several occasions, engaged with his squadron, tho' consisting only of three or four large ships and a small frigate, so to block up the harbour, that no succours should be thrown into it; whilst the land forces besieged it in form. The greatest difficulty was the want of regular troops, and

and experienced officers capable of conducting a siege; and the discipline of the soldiery, that there might be some probability of succeeding. This embarrassment was removed by an expedient of Mr. Shirley's, and to which chiefly was owing the happy event of the expedition. There was a gentleman of the name of Pepperel, one of the largest traders in Boston, who had a general correspondence among the country people of the colony, both Indians and Mestizos. He placed an entire confidence in them, and trusted them with whatever goods they wanted; and they were no less punctual in their payments at the time of their several harvests. These acts of kindness, and the open courtesy with which he always treated them, had endeared him to such a degree, that they looked upon him as their father; and so sensible are even the rudest minds of disinterested beneficence and affability, that they on all occasions expressed an unreserved devotion to him; and no doubt was made, but they would readily sacrifice themselves for him at his desire. On this confidence the governor of Boston, proposed to Mr. Pepperel, that he should go general of this expedition; as thus all the country people would offer themselves to go volunteers, and grudge no dangers or fatigues which they shou'd undergo in his presence. Mr. Pepperel was not ignorant of his interest, and saw all the weight of the proposal; but declined it, as being entirely destitute of that military knowledge required in much inferior posts. At length yielding to the instances of the governor, and the entreaties of his acquaintance, who seconded the proposal, he accepted of the post; and at once from merchant became a warrior. This was no sooner made public, than multitudes of the country people flocked from all parts, desiring to be enlisted, and impatient for the enterprize: rather from a zeal

to accompany their chief protector, than for any concern about the conquest of Louisbourg.

SUCH was the privacy of the enterprize, that even in England nothing of it was known till the execution. The governor had sent notice of it to his sovereign, but it went no further, lest an enterprize undertaken with so much spirit, and of such importance, should be rendered abortive.

Thus the new-raised troops with provisions and military stores, but little suitable to such an attempt, embarked at Boston; and, in company with commodore Warren's squadron, sailed for Louisbourg; which received the first notice of the design from the appearance of the armament.

I have already mentioned that France every year sends a remittance to Louisbourg of money and provisions for the payment and subsistence of the garrison; and for the repairs and improvement of the fortifications: at which the soldiers themselves, when not on guard, very gladly work as being a comfortable addition to their pay. But through covetousness, one of the general vices of mankind, those who were commissioned with the payment of the soldiers, and even the very officers of the garrison, besides wronging them in what they earned by their work, curtailed them even in their subsistence money. This was no recent evil; and on the death of the governor, the foregoing winter, the oppression of the rapacious paymasters and officers rose to such an excess, as twice to occasion a mutiny in the garrison, and for want of timely lenitives, these resentments contributed not a little to the loss of the place.

THE garrison of Louisbourg and all its forts, consisted only of six hundred French and Swiss regulars, and eight hundred militia; formed of all the inhabitants capable of bearing arms. The governor of Canada, who was not ignorant of the discontented
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state of the garrison, and knowing that even with an unanimous zeal, it was not a sufficient number in time of war for a place of such consequence, had, without any knowledge of what was on the carpet, offered to send a reinforcement to Louisbourg. But the commandant, either apprehending that there would be no occasion for making use of those succours, or that he judged the usual force sufficient for its defence, or for some other secret reason, thanked the governor of Canada for his offer, and told him that on any appearance of danger he would embrace it. It was not long after before he saw himself surrounded by the enemy; and all the ways for applying for succour blocked up. Thus he became besieged in form, his forces unequal to the defence of the place; and without any probability of receiving a reinforcement either from Canada or Europe. This was the first, and not the least error to which his disgrace for the loss of Louisbourg may be imputed, as with the succours offered he would have found himself at the head of a body of men more than sufficient not only to defend himself; but to sally out and drive before them the raw undisciplin'd multitude which were come against him.

THE design of the English having been to surprise the place when unprovided, they pushed the enterprize with the greatest dispatch and vigour, that they might prevent the arrival of the annual supply from France: and with this view it was no later than the end of April or beginning of May, when they appeared before the town, in hopes of the double advantage, that instead of its reaching the French, the ships that brought it would fall into their hands, as it indeed happened. Another accident equally unfortunate with the former, was, that a man of war and a frigate having been fitted out at Brest for carrying succours to this place, and loaded with all kinds of military stores, and ready

to put to sea within two or three days, the man of war took fire, and was burnt to the water's edge. Nor was there at that time any other ship fit to supply her place, except the *Vigilante*, just on the point of launching. The captain of the ship which had been burnt, was the marquis de la Maison Forte; who also was appointed to command the *Vigilante*: and get her ready with the utmost expedition for the same voyage. This delay however gave an opportunity to the English of making themselves masters of the entrance of the harbour, and landing the troops for the siege, tho' they did not venture to open the trenches for battering in breach.

WHEN the *Vigilante* arrived near the coast of this island, the atmosphere was filled with such a thick fog, that to have attempted to approach so near as to have a sight of it, would have been dangerous: accordingly the marquis slackened sail, and tack'd till the weather shou'd clear up, that he might make the island without any danger. On the 30th of May, he discovered near him a frigate of forty guns, which he immediately knew to belong to the enemy; and elevated with the hopes of such a capture, began to fire at the frigate, which, as had been concerted, feigned a flight; and, favoured by the fog, drew the *Vigilante*, which eagerly gave her chase to that part of the coast where the other ships of the English squadron lay: so that when the fog, which hitherto intercepted the sight of distant objects, became dispersed, the *Vigilante* found herself in the midst of Mr. Warren's squadron. Then the frigate which had decoyed her into the snare, together with two men of war, the one of sixty and the other of fifty guns, began about half an hour after one in the afternoon, to pour their fire into her, as a ship, whose safe arrival would have frustrated their enterprize. Another great disadvantage to the *Vigilante*, besides this superiority was, her being so
deep

deep loaded with military stores, that she could make no use of her lower tier. But neither this disparity, nor the sight of two other ships at a small distance could intimidate the French from making a vigorous resistance till nine o'clock at night, when the ship being battered in every part, full of water, and her rudder shot away, they surrendered; lest their heroick courage might have been misconstrued to have proceeded only from a savage despair. To this misfortune France may attribute the loss of that important place: for the ignorance of the besiegers, whose conduct shewed them not to have a single ray of military knowledge, the vigorous resistance of the forts, which they now began more and more to think impregnable, the small quantity of ammunition, and the proportion of the artillery to the design, together with the increasing disgust of these new-levied rusticks, at the fatigues and dangers of war, which had already lasted long beyond their expectations: these circumstances, I say, had so discouraged the New-England men, that they began to repent of having left the repose of their plantations, for what some now called a romantick scheme; and the general inclination seemed to be for a return: and this being known from some of the English as bore none of the lowest commissions, a resolution was taken, that if they were not masters of the place in a fortnight at farthest, the siege should be raised. But the taking of the *Vigilante*, diffused a new spirit thro' the troops: and seeing that by this capture they had gained a considerable reinforcement, and that the fort was deprived of the assistance so long expected, their hopes of success revived; and they pushed the siege with more vigour than even at the commencement of it.

At the same time the English laid siege to the fort, they also threatned the royal battery, having a body of troops encamped on that side, tho' with-

out ever risking an assault. This battery, happened to be commanded by an officer of no competent experience, and very unfit for such a post; the garrison also was weak, and it was without any guns towards the land, which was the very place facing the enemy; and consequently the only one from whence they could be annoyed. In this exigence the commandant of the fort went over to view it and give directions; but as he could not spare any men, he left orders, that in case of the approach of the enemy on that side, they shou'd remove thither the guns which pointed seaward; and use them to the best advantage. But lest the royal battery should fall into the hands of the enemy, who would certainly turn the cannon against the fort, he left instructions with the commandant, that if he found it absolutely necessary to capitulate, he should with all his men, pass over to the fort, after nailing up the artillery, so as to render it unserviceable to the enemy. But the poltroon commandant of the battery availed himself of this instruction to hasten his retreat: and, without staying till he had tried the success of his cannon on the enemy, who continued quiet in their camp; that very same night embarked his men, and made over to the fort in a hurry, on pretence that the enemy had made an assault on the battery with a large force. But the falsity of this plea was soon discovered, the French flag flying for some time after; an evident sign that there was no person in the fort to lower it: which could not have been the case had the English made the pretended attack.

THE enemy observing from their camp, that no person appeared as usual on the parapet of the royal battery, concluded that the garrison were employ'd on some secret attempt, or on some works within the fort, and therefore did not make any approaches, till questioning whether the French might not privately have abandoned it, a Boston Indian (for the English army

army was a medley of various kinds of people,) less fearful than the others, offered to clear up the difficulty. Accordingly without any arms, as if disordered in his senses, he went in a rambling manner towards the gate: where, forsaken as it was, he had no great difficulty of getting into the fort; and immediately gave notice of its condition by lowering the French flag. On this signal the English army advanced with great alacrity to take possession; and the artillery not having been well nailed up, was made fit for service; and proved a very great detriment to the town, which it batter'd in flank.

ALL the guns of the royal battery were from 36 to 40 pounders, the *Vigilante* also carried some of the same size; all which the English, on being masters of this fort, employed against the principal place; and under the shelter of these guns, which kept a very smart fire, they began their approaches, and raised forts for battering in breach. The place was bravely defended: but a large breach having been made, and every thing prepared for a storm, it was thought proper to capitulate on honourable terms; which were readily granted by the English, not less out of esteem for that valour which a concurrence of misfortunes had forced to yield, than from a desire of putting an advantageous period to a state of life, which had drawn them from their domestick concerns, and was not at all agreeable to their disposition. The officers of the besieged were not ignorant, that the most favourable opportunity of repelling the enemy, was to fall on them when they were beginning their works, in order to form their approaches: yet such was the mistrust from the too recent mutinies of the regular troops, that though they themselves made the offer, a sally was not judged adviseable, fearing that the soldiers in their present discontent, being once without the walls, would go over to the enemy, either from a dread of the punishments which they were conscious their disobedience deserved,

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and would on some favourable opportunity be inflicted on them; or to be revenged for the oppressions which they had undergone from their commanders.

UNDER a combination of contrary events and with a weak garrison, this place held out a siege of six weeks; not surrendering till the end of June. By this success England made an acquisition of new dominions, and the colony of Boston acquired an increase of territory, prosperous before throughout its large inland extent, it only wanted this island to command the whole coast: and Louisbourg being now annexed to it, a short account of this colony will not perhaps be unacceptable.

CHAP. VIII.

Of the ENGLISH COLONY of BOSTON, its rise, progress, and other particulars.

THE first settlement of the colonies of New-England, the principal province of which bears that name, and has Boston for its capital, was made in the year 1584 by Sir Water Raleigh, tho' the first discovery of these coasts is not to be attributed to him; Juan Ponce de Leon, having many years before, namely in 1513, given them the name of Florida, from his discovery of them on palm sunday; he was soon after followed by Lucas Vazques de Ayllon, a native of Toledo, who having been driven by a tempest on the east coast of Florida, he afterwards employed an interval of fair weather, in coasting, reconnoitring, and taking draughts of its capes, rivers, and bays; at the same time landing in several parts, and quietly trading with the natives.

RALEIGH took possession of this country in the name of queen Elizabeth of England, and gave it the title of Virginia, a corruption as some think from that of
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the chief Cacique of these parts, who was called Virginia; but others, and indeed the generality, will have it to have been in honour of his sovereign; and in allusion to that princess's invariable aversion to marriage, which would have brought her into a state of subordination; but to whoever the compliment was designed, whether to the Cacique or the queen, this is the name of that part of the coast which reaches from 38 to 45 deg. of N. latitude. Raleigh began to people it with his countrymen; and he found such great numbers ready to embrace his proposals, and second any further enterprizes, that the settlement he had made, increased beyond expectation, and the country was divided into several provinces, beginning with the most northward, which lies in 45 deg. by the names of New England, New York, Pennsylvania, Maryland, and the most southern retained its original name of Virginia. This last was the chief object of the attention of Raleigh, and afterwards of England: no measures were neglected for the peopling and prosperity of it. Hither particularly fled the unfortunate friends of Charles I. as an asylum from the cruelties of Cromwell and his parliament, who, not satisfied with having embued their hands in the blood of that monarch, by causing his head to be struck off on a publick scaffold, and by this action casting a shade over the honour of the nation; now endeavoured to wash off that horrid stain by the blood of others: and to palliate their tyranny, and give a colour of justice to their resolutions, they pretended that all who did not conform to their pleasure, were the king's adherents and malignants. In this dangerous situation, great numbers of honourable families were obliged to seek in other climates that security, which they could no longer enjoy in their native country.

THESE numerous emigrations not only enlarged the first towns in Virginia, but also occasioned the building of many others. The royalists had made choice of
Virginia

Virginia preferably to any other part, as being sure of the protection and countenance of Sir William Berkley, governor of that province, who abhorring the procedure against his sovereign, maintained his loyalty unshaken; refusing obedience to Cromwell, and immediately declaring for the son of the late unfortunate monarch, as his rightful sovereign: but though Virginia had received such large additions by several vast emigrations of people, and though companies were erected in England for the support of it, yet not receiving the necessaries wanted both for cultivation and defence, they had the mortification of seeing the province of New-York taken from them by the Dutch; who, desirous of a settlement on this coast, twice dislodged the English, reducing them within the limits of Virginia, till a peace was concluded betwixt these two nations on the 19th of February, 1674.

THIS was not the only disgrace attending the English in these parts: for as the Dutch had drove them from New-York, so they were dispossessed of other countries; of Florida by the Spaniards, and of Canada by the French: and tho' they still remained masters of a considerable extent of country, yet their settlements were not so secure, so well established, and placed on so good a footing as they have been since. This partly arose from the discovery of a tract of land betwixt New-York and Virginia; the soil so fertile, and the temperature so mild, that it was thought the peopling of it would be attended with greater advantages than that of any other of their colonies. This discovery with the particulars, was fortunately published in England at a time when severe persecutions were carrying on against the quakers, a sect newly sprung up, and which, like primitive christianity, increased the more it was persecuted, that now it numbered amongst its members several persons of a more elevated rank and greater abilities than its founders. Among these was one William Penn, who, both on account of his parents and his

his personal qualities, was universally esteemed. To him Charles II. made a grant of the province, that he might withdraw thither with all his sect; as thus it would become totally extinguished, and policy hoped to accomplish that by indulgence, which it had in vain attempted by rigour.

THIS grant was made to William Penn in the year 1681; tho' others date it from the year 1682. However, he set out with a numerous and well-provided company; and began to people the province which had been granted him, calling it Pennsylvania, from his own name, and the woodiness of the country. In order to increase his numbers, and secure their stay by the strongest ties, he made one of the fundamental laws of his colony, a general toleration, by which all who followed the precepts of morality, should enjoy the free exercise of their religion, without molestation; which, with other privileges and immunities granted to the settlers, had such good consequences, that industrious persons flocked thither from several parts, particularly the French refugees from England. The number of families increased in a short time to such a surprising degree, that the first territory not being sufficient for them, they spread themselves along the neighbouring colonies on the coast; where their descendants still continue. To these are owing the commencement and rise of the town of Boston, which, by the description I have from many who have been there, may, for extent, wealth, and handsome buildings, vie with some of the most flourishing in Europe: nor is this the only place in such happy circumstances. Besides the many towns on the coasts, the inland parts, to the distance of one hundred leagues and more, also make a cheerful appearance, being diversified with large towns, villages, seats, and plantations. Thus, from the exuberant fertility of the country and the industry of the people, the nation reaps an immense benefit.

THE resort of so many nations, which compose the inhabi-

inhabitants of New-England and the other provinces, renders them so populous and wealthy, that a considerable kingdom might be formed of them: for though its extent along the coast be not very large in comparifon of others in America, this deficiency is compensated by its inland diftance, and the great number of people it contains. Thefe inhabitants, though fo different as to their native countries, are all fubject to the fame laws in refpect of polity and civil government; and live in a quiet obedience to them and harmony with each other. As to religion, the original toleration ftill obtains; and one fees here all the fects of Old England, and even thofe of other proteftant countries: but the roman catholicks, fo far from being tolerated or connived at, are not admitted to fettle in this colony.

ALL this country is of an extraordinary fertility, and particularly abounds in timber for fhips; fo that great numbers of veffels are every year built in thefe parts, though the timber is not accounted the fitteft for this ufe, as not lafting above eight or ten years, and therefore is made ufe of only for floops, bilanders, brigantines, and other veffels of fmall burden. Thefe large and wealthy provinces, fuch as that of Bofton and the others, are fubject to the fovereign only, as agreeable to their own laws: the gentlenefs of the government to them fecures their affection; and the governor fent over to them from England is looked upon by the others only as one of their eminent fellow citizens; and beloved for his care of the publick welfare and the tranquillity and fafety of the whole fociety. They allow him a competent falary: as they do alfo to the judges, for the more fedulous adminiftration of juftice, without any further impoft, tax, or demand. In order to prevent the leaft encroachment on fuch a ftate of freedom, they allow of no fortifications or garrifons among them, that under pretence of fecurity of their poffeffions their liberties may be in danger. Thus thefe

these provinces, in reality, constitute a kind of republick, partly admitting the political laws of England as depending on it; but either amends or rejects those which may injure its immunities: the towns being the fortresses of the country, and the inhabitants the garrisons. Here is seen an universal concord, union, and friendship: the great do not despise or insult the mean, nor the rich distinguish himself from the poor, by luxury, pomp, and an imperious carriage. Here also is none of that pernicious, dishonest affectation of appearing above their circumstances: and what is still more admirable, that though five or six different sects are openly professed, we see none of those feuds which naturally arise among persons of different persuasions. Nor do the inhabitants, notwithstanding they are composed of such different kinds, as Europeans, Creoles, Mestizos, and natives or Indians, the latter of which are intractable and ferocious, ever offer to disturb the government; but imitate, in this particular, the peaceful behaviour of the others. This sociable conformity greatly contributes to the increase of these colonies; for as many of the causes of the decay of families do not subsist here, nor is there any thing to create private differences, the repose in which they live, naturally induces young persons to marry; and the rather, as there is no difficulty in providing a subsistence: a quantity of fertile land being allotted to every one who petitions for it. Thus the territories of the colony increase, and as they increase are cultivated.

THE marquis de la Maison Forte having been carried to Boston after he was made prisoner, drew up an exact account of this colony; and was pleased whilst we were both prisoners at Fareham in England, to communicate it to me: and it is from thence I have chiefly extracted the foregoing account. The marquis is of opinion, that within a century, Boston, in extent and number of people, will form a kingdom superior to that of England; and will be able to give law to all

the neighbouring countries. This conjecture he deduces, and not without probability, from its amazing progress since the time of its first establishment; nor can it well be doubted, when at its commencement, as I may say, it had a spirit sufficient to undertake the conquest of such a place as Louisbourg; and a conduct to accomplish it; so that it is reasonable to expect, that with the future increment of power and people, it will exert the same spirit and conduct to remove by force all obstacles to its greater aggrandizement: especially as they can meet with little resistance, the whole country being, as it were, destitute of inhabitants.

BUT it must be observed, that though these colonies are so large, fertile, well peopled, and flourishing, yet the current money is not of metal, but of paper, in the form of common coin, being two round pieces pasted together, and stamped on each side with the arms of the colony: and of this there are pieces of all values from the lowest to the highest; and with these they buy and sell without making use of any metallic coin whatever. But as these are liable to grow foul, or break with use, there is a particular house which may be called a kind of mint, this paper-money being made there; and another in every town for the distribution of it. To these houses are brought all such pieces as from any cause whatever can no longer pass current: and here others of like value are issued in the lieu of them. In this particular the disinterestedness and probity of the directors of this money are really admirable, as having it in their power to enrich themselves by causing great numbers of this specie to be struck, and putting them in their own purses.

THE houses for distribution of this money receive remittances of new from the chief house at Boston, and pass accounts with the directors by sending those which have been brought for exchange. And such is the integrity of these judges, that even a slight suspicion of being capable of a fraud would be an injury to the
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high reputation in which they stand. But what seems strange and almost incredible is, that they, in whose power it is to give what value they please to the paper, by the stamps, of which they have the care, never have been known to abuse their trust: but the wonder ceases upon reflecting, that the former establishment of these colonies is in a manner owing to quakers; and that, to the laws which they and the first settlers compiled, the colonies chiefly owe that quiet and prosperity they still enjoy. The quakers are a kind of sectaries, who tho' zealously fond of several ridiculous and extravagant notions, cannot be sufficiently commended for their punctual observance of the laws of nature: sometimes they carry this strictness to superstition: and from this principle all the penalties laid on them in England could not bring them to take the oaths required by the government, so that at length they obtained from the parliament, that the simple affirmation of a quaker should have the same force as an oath, except in capital cases. As they make such a strict profession of truth, and lay down as a fundamental article of their belief, the necessity of inviolably adhering to their affirmation, they also make profession of candour, justice and simplicity in all their dealings; and it is a thing well known, that all treaties, agreements and conventions made with quakers, tho' only on their bare word, prove better founded and fulfilled, without any of that chicane and delay, which so often occurs in those with other people, tho' corroborated by bonds, witnesses and securities. Such persons as these having the direction, distribution and making of the money in the colony of Pennsylvania, and others where it is current, the inhabitants are under no manner of concern with regard to any malversation; nor can it morally be expected, for such a breach of trust would be a total departure from their faith. This has been their uniform conduct: and as this sect has greatly increased in these colonies, they have always strictly

adhered to their ceremonies and rules; and irreproachably observed the maxims transmitted to them by their ancestors; and this probity has doubtless communicated itself to the members of other religions, that among those people to harbour the slightest suspicion concerning the disinterestedness of their magistrates, would be an injury; those virtues being as common here as they are rare among other nations.

THE traders sell all their European goods in exchange for this money; and with it buy those of the country; and consign them to their correspondents in other parts for vent: and having made up their gains in silver or gold they remit it to the bank in London: and as in their own country they stand in no need of coined gold, or silver, they purchase with the yearly returns of their gains such goods as they want: and these they send to Boston on their account. Thus the commerce is every where kept up; and the silver and gold specie remain in England. The wealthy inhabitants of Boston have at the same time two capitals; one in effects and paper-money; and the other returns from the bank, where the principal rests without any diminution.

HAVING given this short account of the happy state of these English colonies; and the means by which they are maintained, I shall add, as a conclusion of this subject, that the unfortunate *Delivrance* was not the only ship deceived by the false appearance of *Louisbourg* being still in the hands of the French. The same fate befel the *Charmonte* and *Heron*, two homeward bound East Indiamen; and who had orders to touch at no other port than *Louisbourg*, where they wou'd find a squadron of men of war, under whose convoy they might safely reach Europe.

CH A P. IX.

*Voyage from LOUISBOURG to NEWFOUNDLAND;
account of that Island, and the Cod fishery : and
also of our Voyage to ENGLAND.*

I Shall not trouble the reader with an account of the disagreeable circumstances of our captivity at Louisbourg ; but justice and gratitude will not permit me to pass over the humanity of Mr. Warren, commodore of the English squadron ; who, among many other instances of his kindness to us, besides the honour of his table, which I several times enjoyed, recommended my papers to the care, and myself to the good treatment of the captain of the ship who was to carry me to England.

On the 5th of October, arrived at Louisbourg a packet-boat, which had been dispatched for England with the news of the taking that place ; and brought with her, grants from the king of England of the title of baronet to Mr. Warren, and to Mr. Pepperell ; also two commissions for the former, appointing him governor of the island, and rear admiral of the blue ; and to the latter a colonel's commission, accompanied with many gracious expressions, relating to the behaviour of these gentlemen. News at the same time arrived that a squadron of men of war was ready to sail with a convoy, having on board two thousand regular troops as a garrison to the new conquest, and six hundred persons of both sexes towards peopling it, with provisions, military stores, and every thing necessary to put it in a posture of defence, in case the French should attempt to recover it. The expectation of this squadron was the only thing that delay'd the other at Louisbourg, it being designed to convoy the Newfoundland fleet ; and the time of its

return to Europe now drew near. And as the arrival of the former could not be far off, preparations were making for our departure : and the prisoners of the three prizes, together with the few French families which remain'd dispersed in their dwellings on the island, and on that of St. John, were to be distributed on board the ships of the squadron. I was ordered on board the *Sunderland*, commanded by captain John Brett, with whom my misfortune had before procured me some acquaintance ; as likewise the captain and officers of the *Delivrance* with others ; one of these was Monsieur de Baubastin, a person of great note in *Louisbourg* ; and who, as captain of the militia, was the more able to acquaint me with several particulars relating to the siege, in which I have reason to believe he did not spare himself.

On the 4th of October, we embarked on board our respective ships. The squadron consisted of the *Princess Mary*, commanded by captain Edwards, who as oldest captain was commodore, the *Sunderland*, the *Superbe*, and the *Canterbury* : the three first of sixty guns, and the last of forty six or fifty. The *Heron* and *Charmante* had also been fitted up as armed ships : the only ones remaining in the harbour, being the *Vigilante*, now repaired from the damages she had received in the action, and the *Chester*.

My papers, as I have before observed, Sir Peter Warren delivered to captain Brett, with orders on his arrival in England to remit them to the admiralty. On the 19th of October, the squadron put to sea, steering for Newfoundland. On the 22d, in the evening we had sight of cape Raze. On the 23d the wind being at S. W. the squadron tacked for the bay of Bulls, where it intended to anchor ; but that being found impracticable, on the 24th it entered that of Ferryland, and remained there till all the merchant ships, which were taking in their lading of cod in the other harbours of the island, had
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rendezvous'd: the method of this fishery and commerce, as likewise the island itself being little known in Europe, I shall give as good an account of it, as my late situation will admit of; the most innocent questions or undesigning remarks, being suspicious in a prisoner.

THE capital of the island of Newfoundland, so famous for the cod-fishery along its coasts and the neighbouring seas, is Placentia. Its first discovery and peopling was owing to the Spaniards before the year 1550, as the very name of the capital, and several other capes and parts of it, as cape Buena Vista, Punta Rica, sufficiently demonstrate. But probably the settlement they made here was of little force; for in 1583, Humphry Girber an Englishman settled there; tho' he was afterwards obliged to evacuate it, and sail for England in the following year; but did not reach it, perishing in a storm.

IN the year 1622, the English again returned to settle in this island, under the conduct of Mr. George Calvert, who, with more foresight than his predecessor, brought with him all kinds of seeds, grain, and pulse, and immediately set his followers to work in clearing those parts which seemed best adapted to culture; and accordingly the produce of his seeds contributed greatly to the comfortable subsistence of these new adventurers, besides affording a stock for the ensuing years.

THE French had for a long time been in possession of Placentia, and with it of the principal part of this island, but without any molestation to the settlements of the English on the eastern coasts of it; and the vessels of both nations quietly fish'd together. The English, however, long entertain'd a desire of making themselves masters of Placentia, as the only fortified town in the island, as also of the whole southern part held by the French. They

had tried force and negociations to compass their ends; but all their endeavours ended in disappointment, till the peace of Utrecht, concluded betwixt that nation and Lewis XIV. of France; when they took advantage of the low state to which that monarch was reduced, and insisted on the entire and absolute cession of Newfoundland; and ever since that time no other nation has settled there; tho' with a reserve of the right of cod-fishing both to the French and Spaniards; to the former by articles nine, ten and twelve of that cession; and to the Spaniards by the 15th article of the same treaty.

THE country of this island is very unequal, and covered with hills and mountains; and these at a distance appear much higher than those near the sea. They are also every where overgrown with pines or pruches, as the French call them, so as to be practicable only in those parts, where the inhabitants have cut roads. This species of pine seldom exceed the height of two or three toises in the open parts: but in valleys where they are sheltered from the frost and the piercing winds, they rise to a much greater height. In winter the cold is excessive here, nothing but snow and ice being seen; and the bays and harbours entirely frozen. This severe weather sets in so early, that tho' it was but the 21st of November when we were there, it froze to such a degree, that we were obliged to wait till the sun had begun to break the ice; and thus force a way thro' without waiting till the next day, lest the frost should return; and then it would have been impossible, and the ships under the dreadful necessity of wintering among the ice.

THIS is the more remarkable, as the latitude of Placentia is only 47 degr. 10 min. and the bay where we happened to be was but little more. The inhabitants of the island keep themselves shut up in their houses during the winter, except in fair and
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sun-shiny weather, when they go out with a great deal of pleasure to enjoy the enlivening rays of the sun.

THE whole circuit of the island is full of bays and harbours, all so spacious and sheltered on all sides by the mountains except their entrance, that the vessels lie in perfect security; they all grow gradually narrower from their entrance, that at the end of them, there is scarce room for a single vessel to anchor. Some of these harbours are a league and a half or two leagues in length; and their greatest breadth about half a league. But there are also others much larger and some less; into them run several rivers and brooks, which besides the fineness of their water afford great quantities of trouts and other kinds of fresh water fish, seeming to vie with the sea in fecundity. These harbours are complete anchoring places, being clear, and having a good bottom, that they may be safely sailed into without a pilot. Some there are with reefs of rocks, but these are generally visible; and those that are covered, are usually about the capes or points at the entrance of the harbours: and therefore by keeping in the middle all danger is avoided. These harbours are so near each other, as to be openly separated by a point of land, which seldom forms a distance of above two leagues; so that the whole coast of the island, is a succession of harbours. But it is not in all that the English have any town or village; and these, which are to be found only on the larger bays, and where the nature and disposition of the country are most convenient for a settlement, are small, and the inhabitants but few. Cod-fishing is the universal business; and besides their dwellings they have offices and storehouses for preparing and laying up their fish till the time arrives for sending it into Europe, on their own account, or selling it to vessels which come there to purchase it in exchange for
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European goods. None of these villages are without a fort or battery for their security in time of war; but these are so insignificant, that the most they could do would be to drive away some petty privateer. The greatest extent of this island is from N. to S. being ninety five leagues, that is, from cape St. Mary, in 46 degr. 55 min to the north-cape which forms the streights of Belisle in 51 degr. 20 min. And the distance from E. to W. that is, from cape Raze to cape Cod, is eighty leagues. But the settlements of the English are only about the harbours and in the country near Placentia; and along its bays eastward towards cape Raze, and from thence to cape Buena Vista: all the remainder both up the country and along the coast, northwards towards the streights, and from thence westward, is entirely desert. This must however be imputed to the rigour of the climate, and the badness of the soil, more than to any neglect of the proprietors, who seldom are wanting in industry, when they have a probability of suitable advantages. The inhabitants relate, that it was formerly peopled by a race of savage Indians, who since have retired to the continent; nor do they often visit the island, and even when they do, they stay but a very small time, returning to the continent from whence they came. This was indeed their custom before ever the names of French or English were known in the island, retiring from the severity of the frosts at the approach of winter. These Indians generally live by fishing and hunting; and both this island, the isle royale and the adjacent parts of Canada, abound in bustards and wild geese. There are also found, tho' in no great numbers, the quadrupeds of this country, as foxes, bears, beavers and others: but the continual search after them for the sake of their skins has much lessened their numbers.

UNDER all the severity of the climate, they are
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not without some horned cattle; but these are preserved with no less care and difficulty than at Louisbourg. The inhabitants have also their little kitchen gardens for summer herbs: but all the other species of provisions, as flour, salt, meat, &c. they are supplied with from Boston, Pennsylvania, and other colonies to the southward. With regard to the goods of other kinds, they are brought from England.

HAVING observed in chapter seven that the greatest part of the French ships employed in the cod-trade do not take in their lading at Louisbourg, it will be necessary to explain the nature of this trade; and in order to a more clear understanding of this traffick it is to be observed, that the ships both of that nation and those of England, have two methods of carrying it on; one is to go to the fishing villages, and there buy a cargo in barter for goods, or to load with cod on their owners account; the other is to employ the ship's company in fishing in the inhabited bays; and for this the French make use of the harbours on the west part of the island of Newfoundland, which as being desert, and likewise an article stipulated in the treaty of peace, no opposition is made to it: for this seems to me the meaning of the expression often occurring in the treaties, *That the English shall admit the French and Spaniards into the harbours of Newfoundland*: and not as some insist the harbours where the English have settlements, they having reserved these for their own convenience. This certainly is the most natural interpretation, for the latter being their dwelling and the best part of the island, it is not to be thought that they would give them away to others, the convenience of harbours, being the sole and chief advantage of this island: and this was the only point in view amidst the contests of nations for the possession of a country valuable only for the fishery; and where the inhabitants,

tants, at least two thirds of the year labour under all the inconveniences and hardships of deep snows, hard frosts, and other rigours of winter.

THE western coast of this island, distinguished by the name of Petit Nord, and no less provided with bays and harbours than those inhabited by the English, forms the department where the French vessels repair to fish; as likewise north beyond the river of St. Laurence; and stretching eastward forms Belisle streight. In all these parts it is an inviolable rule, that the vessels which comes first has the privilege of chusing her bay, and the best part in it for fishing; and likewise has the title of admiral of it: and as such not only all the timber works which happen to remain there belong to the master, but he also assigns to every vessel her particular birth, tho' herein he has always a regard to the date of their coming into the bay: and during the whole time of the fishery, he carries a flag at his main-top-mast head. This distinction and the advantage of chusing the station for fishing, are such powerful incentives to expedition, that tho' the harbours are generally frozen in the months of March and April, some ships arrive there during these months, and secure to themselves the best stations, and build huts beforehand, by sending some of their crew in their long-boats, when the ship is at the distance of fifty leagues or more from the coast, tho' it must be acknowledged, that this ardor is often attended with fatal consequences; the boat during the darkness of the nights running on the large islands of ice common on the coast; and sometimes foundered in storms, which are here very sudden and violent. But these dangers are all overlook'd by an attachment to gain and frivolous ambition. The success or failure of this fishery depend indeed in a great measure on the station of the ship, and the conveniences for curing the fish, Besides as the wages paid by

by the owners to the master, petty officers and men, is always one third part of the found fish brought to Europe, the shorter the time, the greater is the advantage to each man on board.

THOUGH all the coasts of Newfoundland may be said to abound in cod, yet in some parts it is found in greater numbers than in others, and some there are which produce few or none. This proceeds from the quality of the bottom; for those parts where the bottom is sandy are fuller of fish than where it is rocky; but if the bottom be muddy, fish are very scarce: likewise in a great depth of water the fish are not caught in that plenty as when it does not exceed thirty or forty fathom. For tho' cod be found at a greater or less depth, yet this seems to be that which the cod most delight in.

SUCH are the motives for which the masters of vessels in this trade are so eager to be among the first, that they may chuse their several conveniences, in order to finish their fishery with the greater dispatch; and returning early to Europe, may turn their cargo to a better account.

WHEN a ship has taken her station, she is immediately unrigg'd; and at the same time a fit place chosen for securing the fish, as it is prepared: huts are likewise run up for the men who work ashore, so as to form a kind of village; and at the water's edge is also built a large stage or scaffold. Here the number of launches designed for the fishery is got ready, and when built are left there till the following year; when he who first enters the bay, has the privilege of applying them to his own use. Every thing being ready, the whole ship's company, officers included, without exception of any one, are divided into as many classes as there are occupations: some fish, others cut off the heads, others gut the fish, which the French call *habiller*; whilst others have the care of salting and laying them up.

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The fishers set out very early in their boats, that they may be at their station by break of day, and do not return till the evening, unless they happen to have caught their boat-load before. This fishery is all performed with the hook; and every boat is provided with a sufficient quantity of all kinds of fishing-tackle, to be ready at hand in case of any accident, as breaking a line or the like. On their return the fish is delivered to those who open them; and that this may be done with the greater dispatch, a boy stands by to hand them to them and take them away when cured. This work is done in a methodical manner; for he who beheads them does nothing else. They are opened with one cut lengthwise, their back bone, and all their entrails are taken out; and another immediately taken in hand, and the offals thrown into the sea. While some open, others salt, and others again pile up; and all this is done with the greatest care and regularity. The next day, or when the salt appears to have sufficiently penetrated, they wash them, and take them in pairs by the tails, then shake them in the water in order to carry off the scum extracted by the salt: afterwards, that the water may run off, they are piled up on little boards; then they are stretched out one by one, with the skin upwards, in order for drying, where they are turned three or four times. Being thus thoroughly dried, they are piled up in small parcels that they may not entirely lose the heat communicated to them by the first salt: and now being salted a second time, they are laid up in regular heaps on the stage; and there they remain till the time of shipping them. As the boats go constantly every day, the work of the several classes may be imagined pretty hard and fatiguing. On the return of the boats they immediately begin with opening and salting the fish, which takes up the greater part of the night; and the succeeding parts
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of the curing abovementioned necessarily keep them employed the following day, when the return of the barks calls upon them to renew their task; that thus they have very few hours left for sleep and refreshment. There are two kinds of cod, as to their quality; and of each three sizes. Both have a line running from the gills to the tail; following the figure of the belly of the fish, and winds a little downwards from the head to the tail; but this is more distinct in one species than the other: and the whole fish from this line to the back is of a dark brown, whilst the lower part is spotted with white. The connoisseurs in fish say that this is better than the other; the whole body of which is of a darkish white with reddish spots; but the belly and all its hinder parts the whitest. I shall not enter into an account of the disproportion of its head comparatively to the other fishes, or the quantity of oil made from it and the livers, which are also very large. As to the species distinguished by their size, the standard cod is that which is two feet in length with the head off. The second is smaller, called the middling: the third is the least. The dealers in this commodity however subdivide it into seven or eight kinds: one of these is a fish in the opening of which, or in severing the head, some fault has been committed.

ANOTHER kind of fishery; but followed more by the French than any other nation, is that of the Mud-fish: and they cure it in the following manner. This fish is caught on the great bank of Newfoundland; and others as far as sandy island south of L'isle royale: and as soon as it is caught it is opened, salted and laid in little piles in the hold of the ship, till it has sufficiently purged; then they shift its place, and having salted it a second time, stow it for the voyage. The ships intending for this fishery repair to the bank in the beginning of February;

bruary: as that caught in summer, that is after June or July, on any of the banks, is inferior to that caught at the end of winter, these ships finish their fishery and return to Europe with such dispatch, that sometimes they are known to make two voyages in a year. For 'tis the south part of the bank that this fish chiefly haunts: and these likewise are accounted better than those taken on the north.

THE cod appears to be one of the most prolific kind of fish. Of this there needs no other proof than the great number of ships which annually load with it only from this island: and it is only known in these seas; for tho' the British channel and the German ocean are not without this fish, their numbers are so inconsiderable comparatively to those of Newfoundland, that they may rather be looked upon as stragglers. Some persons of long experience in this fishery, informed us that the cod spawns twice a year; and besides the infinite number of their animalculæ, it is very seldom that any of them miscarry; for they deposite them in the sand; and thus by a natural instinct they are laid on these banks, to which they adhere; without being ever removed by any agitation of the waters, till impregnated with life. The cod also delights to continue at the bottom; at least is never seen on the surface of the water. But tho' their number is still immense, they are evidently diminished, a proof of this is that much fewer are now caught in the same space of time, than there were twenty five or thirty years ago.

THE coast of the continent opposite to Newfoundland is inhabited by Indian savages; and tho' the crown of France keeps possession of it for the conveniency of the fishery; it has no proper settlement: and was represented only by a person who solicited and obtained, without much difficulty, the title of governor of these countries. He kept up a
good

good correspondence with the Indians, and lived among them. The winters he spent solitarily with his wife and family; in summer time he enjoyed the company of the masters of the fishing vessels. Thus he spent many years, and as I have been informed, it was not till this present year 1745, or a little before, that he retired to Canada; and rather out of indulgence to his wife's fears of some misfortune in the present war, than from his own inclination. These Indians live very easily with the French, come to their huts, and bring them game in exchange for brandy, wine and toys: But are much addicted to theft, as many ships have experienced by the loss of their sails and other parts of their furniture when ashore; so that it has been found necessary to keep a constant guard; and for greater security, the tents and huts are so disposed, as entirely to environ on the land-side as in a fort the whole spot of ground where their other necessaries are kept. These precautions and the known alertness of the French on any sudden alarm, have disheartened the Indians, that of late, despairing of success, they seem to have desisted from their pilfering practices.

THE manner of the English fishery on the bays of the east coast of Newfoundland, is carried on in the same manner as that of the French before described; and whether it be that the great bank lies nearest, or that its bottom is such as this fish most delights in; and where consequently it is more numerous than in the western parts, that nation chose these parts preferably to the others, as the French do not frequent the western parts so much as the *Petit Nord*.

THE frosts being set in, laid our squadron under a necessity of hastening out of this bay, which it left on the 21st of November, with the vessels under its convoy; and in the offing was joined by many others, so as in the whole to form a fleet of

betwixt sixty and sixty five ships of all sizes : and among these were two frigates of forty guns, who had continued cruising in these parts to secure the fishery against any attempts of the French privateers. Our voyage to England afforded nothing remarkable ; and on the morning of the 22d of December, the squadron anchored in Plymouth-sound, except the Sunderland, which kept on her course with a considerable part of the convoy, and at three in the afternoon came to an anchor in Dartmouth road.

WHILST our squadron lay at Newfoundland ; and in the passage to England, it met with several storms, which I shall specify in order to convey some idea of what may be expected in these seas. On the 3d of November, the wind blowing fresh at W. and with all the appearances of a violent storm, the wind abated and the weather cleared up. But on the 10th of the same month we had a storm at N. W. lasting from two in the afternoon, till two the next morning ; and on its decline snow and showers. On the 14th it began to blow fresh in the morning ; and at noon came on a storm no less violent than the former, at N. E. and E. N. E. It continued in this point till the 15th, when in the morning it shifted to the north, tho' blowing still with the same force ; but at four in the evening it began to abate. This was succeeded by thick snow : and on the 17th, and the days following, came on those frosts which obliged the squadron to hasten its departure from that island.

WHILST we were on our voyage, namely on the 22d of the same month of November, we had hard gales at east, which on the 23d increased to a direct storm, that lasted with all its violence till the 26th, when the wind came about to S. W. and the fog which had covered the whole atmosphere cleared up. On the 27th of the same month, it began to blow hard at S. W. and thus continued at
the

the same point and at S. and W. without abating in violence till the 4th of December; when shifting to the N. W. we had fine weather. Afterwards the wind was at N.W. and N. and from thence veered to the N. E. and E. where it continued with some violence till the 21st of December; on the evening of which it came about to the S. and S. S. W. that the fleet was obliged to work up the channel. In 48 degr. 45 min. lat. the lead was hove, and found 78 fathom water, with a bottom of fine white sand, which is the particular mark of the entrance of the channel.

DARTMOUTH harbour is a kind of road or open bay, at the end of which stands the town of that name. The country is delightfully interspersed with seats and farm-houses; which with the various cultivation of the hills and plains, the verdure of the pastures, and the hedges separating the fields, make a most agreeable appearance; and shew the goodness of the soil, and the industry of the inhabitants. We stay'd here no longer than till the wind favour'd our proceeding to Portsmouth, which was the rendezvous of the whole squadron; and on the 28th the wind veering to the S. W. and W. we got under sail; and on the 29th the ship anchor'd at Spithead, where at that time lay seven three deck ships carrying from 90 to 100 guns. From the ship I was carried to Fareham, a pleasant village at the upper end of Portsmouth-harbour, and about three leagues by land from the town. This being appointed for the place of my captivity, and of those who had been included in the capitulation of Louisbourg: the fate of the others was to be confined in the common prison at Portchester castle. The commissaries indeed could not well take upon them to dispense with the strictness of their orders. I must not here omit the courtesy and generosity of captain Brett of the *Sunderland*, to all the prisoners of any rank, whom he

not only admitted to his table during the voyage ; but prevailed on all the other officers to imitate this good example ; and who seemed to vie in civilities towards us, and humanity towards the inferior fort ; sparing for nothing to alleviate our misfortunes. And let this remain a monument of my gratitude to such a generous set of gentlemen.

WE arrived in England at the time when Charles Edward eldest son of the Chevalier de St. George landed in the north of the kingdom, among the Scots Highlanders ; and was by their assistance endeavouring to recover the throne of his ancestors ; tho' with how little success is now known to all the world. These commotions left little hopes of a favourable reception to us prisoners, whose long sufferings and hardships naturally caused more ardent longings after ease and liberty : and the jealousies, which in such cases are only a prudent care, together with the irregularity of some prisoners, who, contrary to the rules of honour, abuse any indulgence shewn them, and violate their parole, occasioned an order for abridging the prisoners of several privileges they had before enjoyed, and confining them with greater strictness. However, the favours which Mr. Brookes, commissary for the French prisoners, and Mr. Rickman, who acted in the same capacity for the Spaniards, were pleased to shew me, were accompanied with such politeness and cordiality, that I became entirely easy under my present condition, and even the reflection on my misfortunes grew less painful. Here I could expatiate in the praise of these two gentlemen ; the former to his learning, abilities, and address in the conduct of affairs, added the most endearing humanity, of which all the prisoners in his department felt the good effects ; but I shall not insist on a character, the brightness of which would be but obscured by the praises of my insufficient pen.

THE commissary for the Spanish prisoners, was Mr. William Rickman, under whose care consequently I should have been, without the circumstance of having been taken in a French ship: yet my being a Spaniard recommended me to his kindness, which I with gratitude own he carried to a very great height; and I had a large share of those acts of goodness by which he has deserved the universal acknowledgement of the whole Spanish nation. For from the beginning of the war, and the taking of the Princessa, he exerted all possible care for the comfort of the common prisoners; and the chief officers he even lodged at his own seat, and many others at an adjacent farm-house, about a quarter of a league from Titchfield in the London-road, called Pelsbrook, and about three miles from Fareham. He made public and private solicitations in their behalf; he treated all with affability, and used the greatest dispatch in their several affairs: he raised charitable contributions, which were chiefly laid out in apparel for those of the lower class; and the officers he in the most genteel manner furnished with money, that they might live in tolerable decency.

BOTH the abovemention'd gentlemen offered to join their interest in soliciting the admiralty for my papers, which was the thing I had most at heart; but I judged that Mr. Brookes, being the commissary to whom I belonged, it would come best from him to inclose my petition, with his recommendation to the duke of Bedford, and the admiralty, that they would be pleased to order my papers to be examined for their satisfaction, and then return them to me. The answer was entirely becoming the generosity of that nation among which the chance of war had brought me: this was, that the duke of Bedford, as first commissioner of the admiralty, and the other lords of that board unanimously, and with pleasure granted the contents of my memorial;

nobly adding that they were not at war with the arts and sciences or their professors; that the English nation cultivated them; and it was the glory of its ministers and great men to protect and encourage them. In the same generous strain ran all the answers with which the admiralty were pleased to honour me with, by their secretary Mr. Corbet; and this condescension put into my hands an opportunity of soliciting several favours to the great relief of the Spanish prisoners who were in Fareham hospital, and the common prison, besides some personal favours for myself. The worthy Mr. Brookes, soon after my arrival, had offered to procure me a warrant for going over to France, in a packet-boat, which was to carry over to St. Malo the Louisbourg captives. But I could not think of going out of England and leaving my papers behind me.

THE insurrection in Scotland induced the admiralty to issue orders, that all prisoners who were upon leave in London, should immediately repair to some distant places; tho' in this no more was meant than their own security, lest in the present commotions the people should rise upon them being Roman catholics, the sovereigns of which religion were judged to foment the rebellion. On this I laid aside all thoughts of soliciting leave to go to London, tho' I was not insensible that my affairs required my personal attendance there. Thus I was obliged to wait till the agitation of the court subsided; for as by their importance they necessarily took up the attention of all the persons at the helm, a considerable time naturally elapsed, before I had the pleasure of seeing the accomplishment of the admiralty's promises relating to my papers.

It was not long before the scale was turned by the great levies of troops in England, and the transportation of others from Flanders to act against those of the pretender, whose son having sustained a defeat,

feat, and being destitute of all resource, was obliged to withdraw from the kingdom. On this the perturbations in the minds of the people subsided; and the ministry seemed to be more at leisure for attending to private affairs.

THIS revived my thoughts of forwarding my affairs, by a personal sollicitation at London. I found no difficulty in obtaining the usual permission, and had the pleasure of performing the journey in company with Mr. Brookes, whom business called to that capital, where we arrived on the 12th of April.

ON my first attendance at the office for prisoners of war, an order was shewn me from my lord Harrington, secretary of state, for bringing me to his house. This nobleman having been ambassador for some years in Spain, among his other eminent qualities had a great affection for the Spaniards, which he was pleased to extend to me in a most obliging reception and assurances, that nothing should be wanting in him to procure me my papers, or do me any other good offices.

Martin Folkes, Esq; president of the royal society of London, a person equally distinguished for his learning, politeness and readiness to do every good action in his power, being informed I was a prisoner at Fareham, and that my papers were lodged at the admiralty; and fearing they might fall into the hands of persons entirely ignorant of their contents, and by that means be mislaid or abused, had applied for having them delivered to him; alledging, that as the subject of them related to the sciences, none could be fitter for them than the society. But as they were unhappily mingled with many others of a very different kind taken at the same time, it was difficult to separate them without the presence of the author himself, to distinguish them by the hand and other marks. By his assistance and the alacrity of Mr. Brookes, who was determined not to give him-

self any rest till the affair was ended to my satisfaction, an order of the admiralty was obtained to the secretary of the India company, to whom they had all been sent, that I might make a search for them, and those which I should separate were to be sent to the admiralty. This order met with such a punctual compliance, that it was executed the very day of its date.

THE president of the Royal society, for whom all the lords of the admiralty entertained an esteem suitable to his great merit, was again pleased to interest himself in behalf of my papers; and in regard to his solicitations the examination of them was referred to him. This gentleman, who possessed in the highest degree all the social and intellectual qualities, affability without artifice, of a genius which nothing could escape, and an amiable deportment, and generous manners, had from my first arrival shewn me great kindness; he introduced me to the meetings of the society: and thus to him I owe the acquaintance of many persons of distinction, and the marks of friendship I received from them. He condescended to carry me to the most famous museums, places of delight to a rational curiosity, where all nature is collected into a living history of the several products of the waters and earth, both in the mineral, vegetable and animal kingdoms. He further brought me acquainted with several of the most distinguished literati: and carried his friendship very far beyond any thing I could have expected.

THE recommendation of so distinguished a person, to whose judgment so much deference was paid in all things, together with the honour of having been one of the two appointed for measuring the degrees of the earth in Peru, had such an influence on the patrons of science, that I should wrong them did I not acknowledge, that I chiefly owe to them, the happiness of recovering my papers, my liberty, and the

the polite treatment several persons of rank and quality were pleased to shew me.

ACTIONS like these convinced me of the sincerity of the English, their candor, their benevolence and disinterested complaisance. I observed the tempers, inclinations, particular customs, government, constitution and policy of this praise-worthy nation, which, in its œconomical conduct and social virtues, may be a pattern to those who boast of superior talents, to all the rest of mankind.

MR. Folkes having gone thro' my papers, made his report to the admiralty; and so much in my favour, that did I insert it here, it would be the most honourable testimonial of our work; and that board being thoroughly satisfied, gave him leave, according to his desire, to deliver them up to me; which he did on the 25th of May. But as a more illustrious testimony of the great esteem with which he honoured me, he proposed to Earl Stanhope and several other gentlemen of the Royal Society, that I might be admitted a member of that learned body, rightly judging that such an honour could not fail of adding an ardour to my desire of contributing to the improvement of the sciences. Having thus happily finished my affairs, and obtained my liberty at the first solicitation for it, I embarked at Falmouth in the Lisbon packet-boat; my predominant inclination now being to see my native country, after such a variety of adventures. On my safe arrival at Lisbon, I hastened to Madrid which I reached on the 25th of July 1746; eleven years and two months after my embarkation at Cadiz on this commission.

I found Spain in mourning for the loss of its late excellent sovereign Philip V. who had passed to a better state, on the 9th of the same month. My first care was to wait upon the marquis de la Ensenada,

nada, secretary of state, with my papers; that he might lay them before his majesty, whom God long preserve. His majesty was pleased to order that these papers should be published under his patronage: a declaration truly becoming a prince, who, to all the estimable qualities of a king and a man, added a love for the sciences.

Thus have we concluded a work, which has been long expected by all nations; its importance entitled it to the encouragement of the greatest monarchs: and the length of time employed in it, long kept in an impatient suspense, the learned of Europe.

F I N I S.



I N D E X.

- A.
- A** BYSSES, frightful ones, Vol. 1. 207
- Aconcagua, Vol. 2. 264
- Adobes, what Vol. 1. 269
- Aji, described Vol. 2. 140
- Adventures, pleasant Vol. 1. 232
- Aguacate, described Vol. 1. 301
- Alaufi, assiento of, Vol. 1. 334
- Alligators, described Vol. 1. 194
- manner of laying eggs 195
- take little care of their young *ibid.*
- their number, how diminished 196
- destroy great quantities of fish *ibid.*
- devour calves, colts, &c. 197
- their great voracity *ibid.*
- often fatal to the human species *ibid.*
- how caught *ibid.*
- Alparupasca, signal on, Vol. 1. 244
- Amancaes, mountain of, its height Vol. 2. 31
- Amatope, town of, described, Vol. 2. 7
- Amazons, account of Vol. 1. 393
- river of, described Vol. 1. 380
- Amparaes, jurisdiction of Vol. 2. 150
- Amula, signal on Vol. 1. 261
- Amusements of Carthagena Vol. 1. 39
- Ananas, common at Carthagena Vol. 1. 71
- described *ibid.*
- dimensions of 72
- Anchovies, great plenty of Vol. 2. 104
- Andaguales, jurisdiction of, Vol. 2. 125
- Andes, described Vol. 1. 130
- Angaraes, jurisdiction of, Vol. 2. 127
- Anfon, lord, takes Paita Vol. 2. 198
- a short account of his voyage 202
- Antin, the marquis de, taken by the English Vol. 2. 333
- Antonio San, mountain of Vol. 1. 217
- Apolo bamba, missions of Vol. 2. 136
- Aporama, a famous gold mine, Vol. 2. 135
- Arauco, Indians of Vol. 2. 274
- Archidona, city of Vol. 1. 369
- Arequipa, city of described Vol. 2. 136
- diocess of 138
- Arica, jurisdiction of Vol. 2. 140
- Armadillo, described Vol. 1. 54
- Afangaro, jurisdiction of Vol. 2. 135
- Afilo, jurisdiction of Vol. 2. 135
- Asses, wild, account of Vol. 1. 316
- Assiento, its import Vol. 1. 322
- Afuay, desert of described Vol. 1. 441
- Ata-Hualpa, king of Quito Vol. 1. 264
- puts his brother to death 265
- put to death by Pizarro *ibid.*
- Atacama, government of, described Vol. 1. 302
- jurisdiction of Vol. 2. 155
- Ata-

I N D E X.

- Atun-canar, described Vol. 1. 335
 Avancay; jurisdiction of Vol. 2. 136
 Audience of Panama Vol. 1. 130
 ——— of Quito Vol. 1. 272
 ——— of Lima Vol. 2. 43
 Avila, city of Vol. 1. 370
 Axes, copper ones Vol. 1. 483
 ——— of flint *ibid.*
 Aymaraes, jurisdiction of Vol. 2. 134
- B.
- Baba, district of Vol. 1. 181
 ——— town of *ibid.*
 ——— river of *ibid.*
 ——— its course altered 182
 Baeza, town of Vol. 1. 369
 Bagre, a fish Vol. 1. 194
 Balza, described Vol. 1. 189
 ——— wood used in building it *ibid.*
 ——— how managed 192
 ——— how steered Vol. 1. 193
 Banana, described Vol. 1. 72
 Bannos, village of Vol. 1. 443
 Barber an Indian, described Vol. 1. 280
 Base for the series of triangles, how measured Vol. 1. 219
 Bastimentos, what Vol. 1. 96
 Bats of Carthagena, described Vol. 1. 58
 Bay of Carthagena, described Vol. 1. 26
 Bay of Manta Vol. 1. 174
 Bay of Conception described Vol. 2. 246
 Beasts, how slaughter'd in Chili Vol. 2. 241
 Bejuco, snake described Vol. 1. 59
 ——— plant Vol. 1. 217
 Bethlehem, order of our lady of, when founded Vol. 1. 271
 ——— great probity of the fathers 272
- Biobio river of Vol. 2. 163
 Birds near Carthagena Vol. 1. 56
 ——— vast flights of Vol. 2. 104
 Biru, town of Vol. 2. 20
 Boca chica, described Vol. 1. 22
 Bongos, a sort of vessel Vol. 1. 108
 Bannos, los, signal on, Vol. 1. 263
 Borma, signal on Vol. 1. 243
 Boston, account of Vol. 2. 380
 Bridges, how constructed Vol. 1. 449
 Bridge, a famous one over the Desaguadero Vol. 2. 162
 Brisas, what Vol. 1. 85
 Buenos Ayres described Vol. 2. 184
 Bueran, signal on Vol. 1. 242
 Building, how performed near Guayaquil Vol. 1. 187
 Bulgados, described Vol. 2. 251
 Burials at Carthagena Vol. 1. 39
 ——— at Quito Vol. 1. 289
 Butterflies of Carthagena Vol. 1. 62
- C.
- Cacao, common at Carthagena Vol. 1. 38
 ——— at Guayaquil Vol. 1. 182
 ——— plantations, great numbers of Vol. 1. *ibid.*
 ——— tree described Vol. 1. 182
 ——— fruit of, how cured 183
 ——— soil proper for 184
 ——— manner of cultivating *ibid.*
 Colcagua Vol. 2. 264
 Calagula described Vol. 1. 454
 Calcaylares, jurisdiction of Vol. 2. 133
 Caldera, in Porto Bello harbour Vol. 1. 90
 Cali, town of Vol. 1. 351
 Callao, terrible earthquake at Vol. 2. 82
 Callao, a palace of the Yncas Vol. 1. 214
 ——— another

I N D E X.

— another	Vol. 1. 487	Carguairaso, mountain	Vol. 1. 214
Caloto bells, their origin	Vol. 1. 358	— eruption of	Vol. 1. 324
Calves, frozen ones	Vol. 2. 103	Carthagena, described	Vol. 1. 21
Caluma, account of	Vol. 1. 174	— discovered, by whom	ibid.
— temperature of	Vol. 1. 205	— advantageously situated	ibid.
Camana, jurisdiction of	Vol. 2. 138	— often taken	22
Camea, described	Vol. 1. 303	— fortifications of	23
Camini, herb	Vol. 2. 173	— houses, churches, &c.	24
Canals, great benefit of, in Peru	Vol. 2. 28	— extent of its jurisdiction	25
Canas, or Canes described	Vol. 1. 216	— bay of described	26
— wonderful phenomena of	ibid.	— account of its inhabitants	29
Calaguala, described	Vol. 1. 454	— dress of the different classes	32
Chancay, extraordinary manure used in that jurisdiction	Vol. 2. 98	— genius of the natives	33
Canches, jurisdiction of	Vol. 2. 133	— customs of the inhabitants	37
Cancla, or cinnamon tree described	Vol. 1. 361	— amusements at	39
Canete, town of	Vol. 2. 115	— burials how performed	ibid.
Canta, jurisdiction of	Vol. 2. 115	— climate of	42
Campanario, signal on	Vol. 1. 245	— distempers, common at	47
Cape Horn, passage round described	Vol. 2. 296	— country about, described	ibid.
— remarks on the currents near	Vol. 2. 306	— trees of different kinds	49
Capiro, a celebrated mountain	Vol. 1. 91	— vegetables in the neighbourhood of	50
Capifayo, what	Vol. 1. 280	— beasts, reptiles, insects, &c.	52
Carabaya, jurisdiction of	Vol. 2. 135	— provisions used by the inhabitants	68
— famous for gold mines	ibid.	— great fertility of the country	69
Carabura, signal on	Vol. 1. 236	— trade of	78
Caracol, account of	Vol. 1. 180	— fair of	80
Caracol folhado, described	Vol. 1. 61	— revenues of	82
Carangas, jurisdiction of	Vol. 2. 152	Cascabele, described	Vol. 1. 59
— mines of	153	Cascade, a beautiful one	Vol. 1. 205
Cargadores, who so called	Vol. 1. 79	Cascarilla, described	Vol. 1. 340
		Casms, large ones left by earthquakes	Vol. 2. 87
		Casone, what	Vol. 1. 197
			Calliva

I N D E X.

- Cassava bread, what Vol. 1. 68
 Castro Virreyna, jurisdiction of Vol. 2. 127
 Casts, or tribes, what Vol. 1. 29
 Caxa mines, what Vol. 1. 470
 Caxamarca, jurisd. of Vol. 2. 121
 Caxamarquilla, jurisd. of Vol. 2. 122
 Caxatambo, jurisd. of Vol. 2. 117
 Cayambe, plain of Vol. 1. 227
 ——— village of Vol. 1. 220
 Cayamburo, mountain of Vol. 1. 319
 ——— ——— Vol. 1. 445
 Cedar tree, described Vol. 1. 48
 Ceremonies at the public entrance of the viceroy Vol. 2. 46
 Ceibo wooll, described Vol. 1. 199
 Chachapayas, jurisdiction of Vol. 2. 121
 Chagre, river described Vol. 1. 106
 ——— fort of Vol. 1. 107
 ——— prodigious trees on its banks Vol. 1. 108
 ——— taken by Morgan Vol. 1. 113
 Chalapu, signal on Vol. 1. 240
 Chancay, town of, described Vol. 2. 26
 Changalli, signal on Vol. 1. 237
 Chapotonada, what Vol. 1. 42
 Chapetones, who Vol. 1. 29
 Characters of several Englishmen Vol. 2. 415 seq.
 Charcas province of Vol. 2. 141
 Chatas, a sort of vessel Vol. 1. 108
 Chayanta, province of Vol. 2. 151
 Chicha, what Vol. 1. 279
 Chichichoco, signal on Vol. 1. 240
 Ciacica, province of Vol. 2. 155
 Chica, described Vol. 1. 303
 Chicas, jurisdiction of Vol. 2. 149
 Chilán Vol. 2. 271
 Chili, great fertility of Vol. 2. 240
 ——— part of the kingdom of, described Vol. 2. 258
 ——— when conquered ibid.
 ——— governments in Vol. 2. 260
 ——— commerce of Vol. 2. 268
 mines of Vol. 2. 277
 Chiloas, jurisdiction of Vol. 2. 122
 Chiloe, account of Vol. 2. 262
 Chilques, jurisdiction of Vol. 2. 133
 Chimbadores, who Vol. 2. 21
 Chimbo, jurisdiction of Vol. 1. 331
 Chimborazo, desert of Vol. 1. 213
 ——— mountain of, Vol. 1. 443
 Chinan, signal on Vol. 1. 244
 Chincoulagua, signal on Vol. 1. 249
 ——— mountain of Vol. 1. 445
 Chiquitos, missions of Vol. 2. 164
 Chirimoya, described Vol. 1. 300
 Chocope, town of Vol. 2. 18
 ——— a remarkable occurrence there ibid.
 ——— observations of a surprising rain there Vol. 2. 74
 Chogllós, what Vol. 1. 305
 Cholos, what Vol. 1. 212
 Chorrera, what so called Vol. 1. 205
 Christopher St. mountain of, its height Vol. 2. 31.
 Chucha, described Vol. 1. 241
 Chucuito, jurisdiction of Vol. 2. 160
 Cha-

I N D E X.

- Chuchunga**, town of Vol. 1. 377
Chulapu, signal on Vol. 1. 249
Churches of Lima, their astonishing riches Vol. 2. 38
Chusay, signal on Vol. 1. 242
Coca, a plant, described Vol. 1. 362
Cochabamba, province of Vol. 2. 152
Cochineal, account of the breeding of Vol. 1. 341
Coco nut, common near Carthagena Vol. 1. 74
 ——— description of 75
Cod-fishery, account of Vol. 2. 405
Colta lake of Vol. 1. 326
Comegan, an insect, described Vol. 1. 66
Commerce of Carthagena Vol. 1. 78
 ——— of Porto Bello, Vol. 1. 101
 ——— of Panama Vol. 1. 124
 ——— of Guayaquil Vol. 1. 198
 ——— of Quito Vol. 1. 307
 ——— of Lima Vol. 2. 106
 ——— of Chili Vol. 2. 268
Companario, signal on Vol. 1. 263
Conception, city of, described Vol. 2. 232
 ——— earthquakes at 233
 ——— government of 234
 ——— dress of the inhabitants 235
 ——— bay of, described 246
Canclon, described Vol. 1. 457
Cordesuyos, jurisdiction of Vol. 2. 139
Condor, described Vol. 1. 455
Contrayerva, described Vol. 1. 455
Convulsions, shocking ones at Lima Vol. 2. 82
Cope, a mine of Vol. 2. 92
Coquimbo, town of, described Vol. 2. 265
Coral snake, described Vol. 1. 59
Corazon, signal on Vol. 1. 239
Cordova, city of Vol. 2. 167
Corientes, city of Vol. 2. 186
Cofin, signal on Vol. 1. 245
Catopaxi, signal on Vol. 1. 238
 ——— terrible eruption of Vol. 1. 324
Cottage on Pichincha, described Vol. 1. 224
Couplet M. death of Vol. 1. 220
Cow, sea, described Vol. 1. 414
Coya, or Coyba, a remarkable insect, described Vol. 1. 360
Cruz de Canos, temperature of Vol. 1. 211
Cuença, signal on the church of Vol. 1. 244
 ——— city of, described Vol. 1. 332
Cuichoca, lake of Vol. 1. 319
Culebrilla, what Vol. 1. 46
 ——— how cured *ibid.*
Currents on the coast of Carthagena Vol. 1. 85
 ——— of the Chagre, velocity of Vol. 1. 106
 ——— observations on Vol. 1. 139
 ——— of Guayaquil river Vol. 1. 186
 ——— a prodigious one Vol. 1. 389
 ——— near Cape Horn, curious remarks on Vol. 2. 306
Cusco, diocese of Vol. 2. 128
 ——— city of described *ibid.*
 ——— temple of 129
 ——— ruins of a famous fort *ibid.*
 ——— cathedral of 130
 ——— parishes of 130
 ——— government of 131
Cuyes,

I N D E X.

- Cuyes, what Vol. 1. 319
 Caylloma, jurisd. of Vol. 2. 138
 — famous for silver mines 139
- D.
- Dances of the Indians, Vol. 1. 275
 Darien, mines of Vol. 1. 129
 — province of, described Vol. 1. 135
 Daule, lieutenancy of Vol. 1. 184
 — town and river of 185
 Degree, length of, how determined Vol. 1. 9
 Deliverance, taken by the English Vol. 2. 346
 Defaguadero, river of Vol. 2. 162
 — famous bridge of *ibid.*
 Dialects different in Quito Vol. 1. 289
 Diseases common at Porto Bello Vol. 1. 94
 — at Carthagena, Vol. 1. 45
 — at Quito Vol. 1. 295
 — at Lima Vol. 2. 89
 Dispertadores, described Vol. 2. 242
- Doctrina, what Vol. 1. 135
 Dominicos, described Vol. 1. 72
 Drake, Sir Francis takes Carthagena Vol. 1. 22
 Dress at Carthagena, Vol. 1. 32
 — of the inhabitants of Panama Vol. 1. 119
 — at Guayaquil Vol. 1. 166
 — of the Spaniards at Quito Vol. 1. 279
 — of the Mestizos *ibid.*
 — of the Indians *ibid.*
 — of the ladies of the first rank 280
 — of the Mestizo women 281
 — of the Indian women 281
 — of the men at Lima Vol. 2. 56
 — of the women *ibid.*
- of the Indian women in Valles Vol. 2. 13
- E.
- Earthquakes at Quito Vol. 1. 294
 — terrible at Latacunga Vol. 1. 322
 — at Hambato Vol. 1. 329
 — at Arequipa Vol. 2. 137
 — at Santiago Vol. 2. 255
 Emeralds, their value fallen Vol. 1. 78
 — cut by the ancient Indians Vol. 1. 485
 — mines of Vol. 1. 494
 Eminences, how descended Vol. 1. 209
- Entrance public of the viceroy of Lima described Vol. 2. 46
 Estancia, what Vol. 1. 30
 Exchequer of Quito Vol. 1. 272
 Expedition to Louisbourg, account of Vol. 2. 372
- F.
- Fair of Carthagena Vol. 1. 80
 — of Porto Bello, described Vol. 1. 102
 Fandango, what Vol. 1. 39
 Feet, smallness of, reckoned a beauty at Lima Vol. 2. 58
 Feralones, what Vol. 2. 190
 Fernandes Juan, islands of described Vol. 2. 217
 Fertility of the soil at Quito Vol. 1. 297
 Festivals, two extraordinary ones Vol. 1. 275
 Fevers at Guayaquil Vol. 1. 169
 Field-tent how pitched Vol. 1. 228
 Fishery, pearl, described Vol. 1. 126
 — at Newfoundland Vol. 2. 401
- Fishing of the Indians described Vol. 1. 175
 — on Guayaquil river described Vol. 1. 193
 Fogs,

I N D E X.

- Fog, a thick one generally at
 Lima Vol. 2. 65
 Fogs, common in the South Sea
 Vol. 1. 159
 Fords, dangerous ones Vol. 1.
 204
 Fortifications, Indian method of
 Vol. 1. 491
 Fortresses of the Yncas, Vol. 1.
 489
 Fox of Carthagena, its artifice
 Vol. 1. 54
 Franciscans, convent of at Quito,
 an elegant piece of architec-
 ture Vol. 1. 268
 Francois, cape described Vol. 2.
 357
 ——— value of to the French
 ibid.
 Frutilla, described Vol. 1. 303
 Fruits of various kinds in the
 country round Carthagena
 Vol. 1. 70
 G.
 Gallinazo, a bird, described Vol.
 1. 57
 Gallinazos eat the alligator's
 eggs Vol. 1. 196
 Gallinazo stone described Vol. 1.
 482
 Gamalote, a plant, described
 Vol. 1. 181
 Garua, what Vol. 2. 69
 Geese, wild, method of taking
 Vol. 1. 53
 Gloria castle Vol. 1. 89
 Godin, M. chosen professor of
 mathematics at Lima Vol. 2.
 291
 Gold, how extracted from the
 ore Vol. 1. 472
 Granadilla, described Vol. 1.
 300
 Guabas, described Vol. 1. 302
 Guacas, or graves of the antient
 Indians, described Vol. 1. 480
 ——— near Lima Vol. 2. 100
 Guaca Tambo, described Vol.
 2. 23
 Guamac Vol. 1. 207
 Guamalies, province of Vol. 2.
 119
 Guamanga, jurisd. of Vol. 2. 124
 Guaniani, signal on Vol. 1. 247
 Guamanga, city of, described
 Vol. 2. 122
 Guamanga, jurisdictions in the
 diocese of Vol. 2. 124
 Guanabana, described Vol. 1. 73
 Guanaco, described Vol. 1. 459
 Guanta, jurisdiction of Vol.
 2. 124
 Guanacauri, signal on Vol. 1. 244
 Guanca-Belica, jurisd. of Vol. 2.
 125
 Guanoes, birds so called Vol. 2.
 98
 Guanuco, city of Vol. 2. 117
 Guapulo, signal on Vol. 1. 245
 Guaqueros, what Vol. 1. 483
 Guaura, town of, described Vol.
 2. 25
 ——— used in steering balzas,
 what Vol. 1. 192
 Guarachiri, jurisdiction of, Vol.
 2. 117
 Guaranda, manner of entring
 Vol. 1. 212
 Guarico, described Vol. 2. 356
 Guarmey, town of Vol. 2. 24
 Guafos, their dexterity Vol. 2.
 241
 Guayaba, described Vol. 1. 73
 Guayaquil, described Vol. 1. 160
 ——— customs and dress of the
 inhabitants Vol. 1. 167
 ——— its riches Vol. 1. 167
 ——— temperature of the air at
 Vol. 1. 167
 ——— snakes and other poisonous
 reptiles Vol. 1. 167
 ——— prodigious number of in-
 sects Vol. 1. 168
 ——— diseases at Vol. 1. 169
 E e ——— pro-

I N D E X.

- provisions and manner of living 170
 — extent of its jurisd. 173
 — river of, described 185
 — commerce of 198
 Guaylas, province of Vol. 2. 119
 Guineos, described Vol. 1. 72
 — how eaten 73
 Guinea pepper, described Vol. 2. 140
- ## H.
- Habilla, at Carthagena described Vol. 1. 51
 Hadley's Quadrant, described Vol. 1. 145
 Hambato, assiento of Vol. 1. 329
 Harbour of Porto Bello, described Vol. 1. 89
 Harbour of Panama Vol. 1. 116
 Hazianda, what Vol. 1. 31
 Horn, cape, passage round Vol. 2. 296
 — remarks on the currents near 306
 Horfes, American described Vol. 1. 464
 Houses, several forsaken on account of the number of Moschitos Vol. 1. 203
 Hueyna-Capac, account of Vol. 1. 264
 Humming bird, described Vol. 1. 458
 Hunting, manner of at Quito Vol. 1. 463
 Hut at Pichinca, described Vol. 1. 224
 Hypothesis, a new one to account for the want of rain in Peru Vol. 2. 67
 — for earthquakes 84
- ## I.
- Jaen government of Vol. 1. 375
 Jauxa, jurisd. of Vol. 2. 118
 Idols of the ancient Indians Vol. 1. 484
 Jesuits, their missions in Paraguay described Vol. 2. 169
 Illinisa, mountain of, Vol. 1. 445
 Jivicatsu, signal on, 260
 Indians, their manner of fishing on the sea Vol. 1. 175
 — on Guayaquil river Vol. 1. 193
 — their unfaithfulness, Vol. 1. 226
 — their dress Vol. 1. 279
 Indians of Quito described Vol. 1. 418
 — their moderation 420
 — their remarkable sloth 422
 — their feasts 423
 — their funerals 425
 — their food ibid.
 — their huts 426
 — their language Vol. 1. 427
 — their superstition 428
 — their marriages 430
 — their insensibility 432
 — their intrepidity 434
 — their constitution 438
 — their diseases 439
 — their diversions ibid.
 — ancient, monuments of Vol. 1. 479
 — very ingenious Vol. 1. 484
 — wild, account of Vol. 1. 497
 — monuments of the ancient Vol. 2. 100
 — Arauco, account of Vol. 2. 273
 Iguana, an amphibious creature, described Vol. 1. 121
 — eaten at Panama ibid.
 — lays great quantities of eggs 122
 Inna Quito, plain of Vol. 1. 266
 Inscription, an historical one Vol. 2. 196
 Iron castle Vol. 1. 89
 Ica, town of Vol. 2. 116
 Islands of Juan Fernandes, described Vol. 2. 217
 Ladia

I N D E X.

L.

- | | |
|---|--|
| <p>Ladies of Lima, their dress Vol. 2. 56</p> <p>Lagarto, what Vol. 1. 198</p> <p>Lalanguso, signal on Vol. 1. 241</p> <p>Lambayeque, town of Vol. 2. 16</p> <p>Lampa, jurisd. of Vol. 2. 134</p> <p>Lana de ceibo, described Vol. 1. 199</p> <p>Lard, its great use at Carthage Vol. 1. 77</p> <p>Laricaxas, jurisd. of Vol. 2. 159</p> <p>— famous gold mine of 160</p> <p>Latacunga, assiento of Vol. 1. 322</p> <p>Lavadero, famous one Vol. 2. 135</p> <p>— what Vol. 2. 270</p> <p>Leprosy, common at Carthage Vol. 1. 44</p> <p>Lima, city of described Vol. 2. 29</p> <p>— when founded 30</p> <p>— name, whence <i>ibid.</i></p> <p>— delightful situation of <i>ibid.</i></p> <p>— river of 31</p> <p>— grand square of <i>ibid.</i></p> <p>— dimensions of 33</p> <p>— disposition of the streets, &c. <i>ibid.</i></p> <p>— houses, how built 33</p> <p>— its parishes 34</p> <p>— convents, &c, 35</p> <p>— hospitals 36</p> <p>— churches 38</p> <p>— power of the Vice-roy of 40</p> <p>— tribunals of 42</p> <p>— how governed 43</p> <p>— University, colleges of 44</p> <p>— public entrance of the vice-roy 46</p> <p>— inhabitants of 52</p> <p>— commerce of 54</p> <p>— dress of the inhabitants 56</p> <p>— number of ornaments, worn by the ladies of Lima 59</p> | <p>— dresses of the lower class 62</p> <p>— temperature of the air 64</p> <p>— seasons, how divided at <i>ibid.</i></p> <p>Lima, never rains there, and why 67</p> <p>— not subject to tempests 77</p> <p>— inconveniences of 78</p> <p>— earthquakes at 79</p> <p>— distempers at Vol. 2. 89</p> <p>— soil of, vitiated by an earthquake 94</p> <p>— monuments of antiquity near 100</p> <p>— different kind of provisions at 102</p> <p>— trade and commerce of 106</p> <p>— extent of its jurisdiction 112</p> <p>Limes described Vol. 1. 75</p> <p>— how used 76</p> <p>Limpie pongo, signal on Vol. 1. 248</p> <p>Lions, sea, described Vol. 2. 322</p> <p>Lipes, jurisd. of Vol. 2. 149</p> <p>— mines of <i>ibid.</i></p> <p>Limpion, what Vol. 2. 108</p> <p>Llama, described Vol. 1. 459</p> <p>Llulla, jurisd. of Vol. 2. 121</p> <p>Log-line, error in marking it Vol. 1. 9</p> <p>Loja, jurisd. of Vol. 1. 339</p> <p>— city of <i>ibid.</i></p> <p>Longitude, how found, by the variation Vol. 1. 14</p> <p>— of Panama, how determined Vol. 1. 111</p> <p>Louis Erasme, taken by the English Vol. 2. 333</p> <p>Louisbourg, in cape Breton described Vol. 2. 363</p> <p>— inhabitants of 367</p> <p>— account of its being taken by the English 372</p> <p>Lucanas, jurisd. of Vol. 2. 127</p> |
|---|--|

I N D E X.

- Lunar rainbow Vol. 1. 62
 M.
 Machangara, river of Vol. 1. 267
 Macas, district of Vol. 1. 372
 Machala, town of Vol. 1. 178
 Madera, river of Vol. 1. 384
 Magdalena, sources of that river Vol. 1. 352
 Maize how prepared by the Indians Vol. 1. 303
 Matapalo, described Vol. 1. 218
 Mal de Valle, what Vol. 1. 295
 Mamarumi, cascade at Vol. 1. 205
 Mameis, described Vol. 1. 74
 Mancora, breach of Vol. 2. 8
 Mangrove tree, described Vol. 1. 179
 — use of its wood ibid.
 Mani, a fruit described Vol. 1. 76
 Manta, a fish of an enormous size described Vol. 1. 128
 Manta, bay of Vol. 1. 174
 Manure, an extraordinary kind Vol. 2. 98
 Manzanillo, described Vol. 1. 48
 Marañon river, described Vol. 1. 381
 Marimondas, a large specie of monkey, described Vol. 1. 215
 Marquis d'Antin taken by the English Vol. 2. 333
 Mosque Pacona, province of Vol. 2. 164
 Masques, jurisdiction of Vol. 2. 133
 Mate, what Vol. 1. 286
 Materials used in building near Guayaquil Vol. 1. 187
 Maynas, government of Vol. 1. 380
 Melipilla Vol. 2. 264
 Mestizos, who Vol. 1. 277
 Mestizos apply themselves to trade Vol. 1. 278
 — their dress Vol. 1. 279
 Micos, a small species of monkeys Vol. 1. 54
 Miguel de Santiago, a famous painter Vol. 1. 278
 — (san) de Ibarra described Vol. 1. 314
 Milin, signal on Vol. 1. 239
 Mines in the kingdom of Terra Firma Vol. 1. 129
 — in the province of Quito Vol. 1. 469
 — in Popayan Vol. 1. ibid.
 — in the governments of Quijos and Macas Vol. 1. 477
 — of Quicksilver Vol. 1. 478
 — of sulphur Vol. 1. 495
 — of quicksilver in Peru Vol. 2. 125
 — of gold, famous ones Vol. 2. 135
 — of silver, in Caylloma Vol. 2. 139
 — of Potosi, how discovered Vol. 2. 145
 — prodigious richness of Vol. 2. 146
 — quantity of silver taken out of Vol. 2. 148
 — of Porco Vol. 2. 149
 — of Lipas ibid.
 — of Oruro Vol. 2. 150
 — of Carangas Vol. 2. 152
 — of Pacajes Vol. 2. 159
 — of gold, famous Vol. 2. 160
 — of Chili Vol. 2. 269
 Mira, signal on Vol. 1. 245
 Mirrors of stone Vol. 1. 482
 Missions of Apolo-bamba Vol. 2. 136
 — of Chiquitos Vol. 2. 164
 — of Paraguay, described Vol. 2. 169
 — how settled Vol. 2. 170
 — inhabitants of Vol. 2. 171
 — temperature of the air Vol. 2. 172
 — products of Vol. 2. 173
 Missions,

I N D E X.

- Missions, how governed** Vol. 1. 240
 — churches of Vol. 1. 175
 — manufactures of Vol. 1. 177
 — priests of Vol. 1. 178
 — manners of the inhabitants Vol. 1. 181
 — policy of the jesuits Vol. 1. 181
 — on the Maranon Vol. 1. 181
Mocha, temperature of Vol. 1. 213
Monkeys, of various kinds Vol. 1. 109
Monquegua, jurisd. of Vol. 2. 139
Monsefu, town of Vol. 2. 17
Monte Christo, town of Vol. 1. 174
MonteVideo, city of Vol. 2. 186
Monuments of the ancient Indians Vol. 1. 479
 — of antiquity near Lima Vol. 2. 100
Mopa-mopa, described Vol. 1. 362
Morgan, John, takes Porto-bello Vol. 1. 86
 — takes Panama Vol. 1. 113
Morrope, town of Vol. 2. 16
Moschitos at Carthagena Vol. 1. 62
 — different species of Vol. 1. 202
 — their tortures Vol. 1. 202
Moths at Carthagena, their surprising voracity Vol. 1. 66
Motives for the voyage to South America Vol. 1. 1
Mountain, an artificial one Vol. 1. 489
Muca muca, described Vol. 1. 460
Mulattoes, how distinguished Vol. 1. 286
Mules, a surprising instance of their sagacity Vol. 1. 219
Mulmul, signal on Vol. 1. 240

N.

Napo, river of Vol. 1. 385
Naranjal, town of Vol. 1. 178
Newfoundland, account of Vol. 2. 391
 — manner of fishing there Vol. 1. 395
Nigua, a surprizing insect, described Vol. 1. 63
 — very troublesome Vol. 1. 63
 — how taken out of the flesh Vol. 1. 64
 — kinds of it Vol. 1. 65
Noises subterranean, whence Vol. 2. 87
Nomarelte, signal on Vol. 1. 263
Nombre de Dios, when founded Vol. 1. 86
Nopal, described Vol. 1. 342
Norona, Fernando de, island of described Vol. 2. 317
 — strongly fortified Vol. 2. 320

O.

Oca, described Vol. 1. 303
Olive plantations Vol. 2. 94
Omaguas Indians, their odd customs Vol. 1. 412
Omasuyos, jurisd. of Vol. 2. 159
Oruro, jurisdiction of Vol. 2. 150
 — mines of Vol. 1. 318
Otabalo, described Vol. 1. 318
Oyambaro, signal on Vol. 1. 236
Oysters, excellent ones Vol. 1. 117
 — produce pearls Vol. 1. 117

P.

Pablo (San) lake of Vol. 1. 319
Pacaes, described Vol. 1. 302
Pacajes, jurisdiction of Vol. 2. 159
 — mine of Vol. 1. 159
Paccha,

I N D E X.

- Paccha, what so called Vol. 1. 205
- Pacific, why the south sea, called by that name Vol. 2. 211
- Pajara Nino, described Vol. 2. 253
- Painting practised at Quito Vol. 1. 278
- Païta, course steered from Callao to Vol. 3. 191
- town of, described Vol. 2. 193
- taken by the English 198
- Palace of the Yncas, described Vol. 1. 487
- another 489
- Palm trees, described Vol. 1. 49
- Palos, herb, described Vol. 2. 173
- Pambamarca, signal on Vol. 1. 237
- Panama, description of Vol. 1. 111
- burnt by John Morgan 113
- rebuilt 114
- totally destroyed by fire 115
- government of 116
- harbour of ibid.
- climate of 118
- drefs of the inhabitants 119
- trade of 124
- mines in its neighbourhood 128
- extent of its audience 130
- province of, described Vol. 1. 131
- Panecillo, described Vol. 1. 267
- Papa-urco, signal on Vol. 1. 239
- Papas, described Vol. 1. 303
- of silver, what Vol. 2. 152
- how form'd ibid.
- magnitude of 159
- Papayas, described Vol. 1. 73
- Pacaguaico, signal on Vol. 1. 268
- Paraguay, government of, described Vol. 2. 168
- history of ibid.
- Paraguay, towns of 169
- missions of ibid.
- herb described 172
- Paramo, what Vol. 1. 441
- Paria, province of Vol. 2. 151
- Paria, lake of Vol. 2. 162
- Parina Cocha, jurisd. of Vol. 2. 127
- Parinnas, breach of Vol. 2. 8
- Parties at Quito Vol. 1. 273
- Paspaya, jurisd. of Vol. 2. 151
- Passage between Callao and Païta Vol. 2. 191
- Patavirca, town of, described Vol. 2. 24
- Pataz, jurisd. of Vol. 2. 122
- Paucartambo, jurisd. of Vol. 2. 132
- Payjan, town of Vol. 2. 17
- Pax la, city of Vol. 2. 156
- magnitude of 157
- prodigious lump of gold found at 158
- jurisdiction of ibid.
- Pearl fishery described Vol. 1. 126
- Peasants of Chili, their remarkable dexterity Vol. 2. 236
- Peckugueros, what Vol. 1. 296
- Pedro St. town of Vol. 2. 17
- Pensylvania, account of Vol. 2. 383
- Perico ligero, a remarkable animal described Vol. 2. 98
- Petrifications, remarkable ones described Vol. 1. 495
- attempt to explain that transmutation ibid.
- Phænomena, curious ones, observed in the desarts Vol. 1. 461
- Picañores described Vol. 1. 458
- Pichinca, great cold of Vol. 1. 222
- height of ibid.
- Pichinca,

I N D E X.

- Pichinca, difficulty of ascending ——— government of, described
 222 Vol. 1. 350
 ——— strange manner of living ——— abounds in gold mines,
 on 226 Vol. 1. 463
 Pichincha, commonly hid in Porco, jurisd. of Vol. 2. 149
 clouds Vol. 1. 229 ——— mines of ibid.
 ——— violence of the winds on Porto Bello, when discovered
 ibid. Vol. 1. 86
 ——— common food there 225 ——— described 87
 ——— time spent on 226 ——— suburb of called Guinea
 ——— signal on 236 88
 ——— famous for its riches and ——— harbour of described 89
 great height 265 ——— fortifications of ibid.
 ——— eruptions of 267 ——— mountain near 91
 Pie de Burro, described Vol. 2. ——— climate of ibid.
 251 ——— beasts never procreate
 Pignas, what Vol. 2. 117 there 92
 Pilaya, jurisd. of Vol. 2. 151 ——— violent tempests at 93
 Pillachiquir, signal on Vol. 1. ——— diseases of 94
 244 ——— inhabitants of described
 Pine-apple at Carthagea de- 96
 scribed Vol. 1. 71 ——— provisions scarce there
 Pisco, town of Vol. 2. 116 97
 Piura, city of, described Vol. 2. ——— waters of, pernicious
 10 ibid.
 Plain of Yaruqui described Vol. ——— forests in the neighbour-
 1. 219 hood of ibid.
 ——— of Cayambe Vol. 1. 220 ——— animals in the woods
 ——— of Turu-bamba Vol. 1. 98
 266 ——— serpents of described 99
 ——— of Inna Quito ibid. ——— trade of 101
 Plata, Archbishopric of, Vol. 2. ——— fair of 102
 141 Potosi, town of Vol. 2. 145
 ——— city of, described 143 ——— famous mountain and
 ——— cathedral of ibid. mines of ibid.
 ——— tribunals of 144 Preacher, a bird, described Vol
 ——— jurisdictions of 145 1. 55
 ——— river of, its use Vol. 2. Precipices, frightful ones Vol. 1.
 164 208
 Platanos, what Vol. 2. 22 ——— manner of descending
 Poetical contest, what Vol. 2. ibid.
 50 Premadillas, what Vol. 1. 119
 Pointis, M. de takes Cartha- Pronunciation, singular in Ame-
 gena Vol. 1. 22 rica Vol. 1. 319
 Pollera, what Vol. 1. 33 Prospects, elegant ones Vol. 1.
 Pomallacta, fortrefs of Vol. 1. 109
 491 Pacara, what Vol. 1. 212
 Popayan, city of Vol. 1. 352 Puchugchu

I N D E X.

Puchugchu described	Vol. 1.	453	Quito, hospitals	271
			— courts of justice	272
Pucro, what	Vol. 1.	189	— corporation	273
Pugin, signal on	Vol. 1.	244	— chapter of the cathedral	
Pulizones, who	Vol. 1.	35	— full of people	274
Puna, island of, described	Vol. 1.	178	— class of the inhabitants	276
				277
Pucaguaico, signal on		238	— dresses used at	279
Pano, town of described	Vol. 2.	163	— public schools	283
Purple, the ancient, how extracted	Vol. 1.	176	— employment of the inhabitants	284
— fish that produces it described	ibid.		— entertainments at	285
			— burials, how performed at	289
Q.			— temperature of the air at	291
Quadrant, Hadley's, described	Vol. 1.	145	— food of the inhabitants	297
Quarries of stone, different ones	Vol. 1.	493	— commerce of	307.
Quebrantahuefias, described	Vol. 2.	214	— province of described	310
Quicksilver, mines of	Vol. 1.	477	— jurisdictions of	314
— in Peru	Vol. 2.	125	Quixos, government of	Vol. 1. 368
Quilotta	Vol. 2.	264	R.	
Quinoa, a grain, described	Vol. 1.	305	Raft, see Balza	Vol. 1. 190
Quinoaloma, signal on	Vol. 1.	262	Rain, why none in Peru	Vol. 2. 67
Quinquina, account of	Vol. 1.	339	Rainbow, a lunar one	Vol. 1. 361
Quispicanchi, government of	Vol. 2.	132	Raneagua, country of	Vol. 2. 264
Quito, city of, its foundation	Vol. 1.	264	Rancherias, what	Vol. 1. 132
— made a kingdom	ibid.		Raspaduras, what	Vol. 1. 306
— situation of		265	Rats numerous at Guayaquil	Vol. 1. 168
— described	ibid.		Rattle-snake described	Vol. 1. 59
— how supplied with water		267	Riobamba described	Vol. 1. 325
— principal square of described		268	River of Guayaquil described	Vol. 1. 185
— its houses described	ibid.		— — how far navigable	ibid.
— divided into parishes		268	— of the Amazons	Vol. 1. 380
— churches of		271	Rivers, how passed	Vol. 1. 450
— its convents, nunneries, &c		270		

I N D E X.

- | | |
|--|---|
| <p>Road from Caracol to Ojibar
described Vol. 1. 204</p> <p>—— a terrible one Vol. 1. 207</p> <p>Roads near Guayaquil, dangerous Vol. 1. 160</p> <p>—— shamefully neglected Vol. 1. 211</p> <p>Robalo, a fish Vol. 1. 194</p> <p>Robberies unknown in Peru Vol. 1. 45</p> <p>Ruins of a famous fort Vol. 2. 12</p> <p>Ruins of a palace of the Yncas Vol. 1. 213</p> <p>—— of several of the ancient Indians Vol. 1. 487</p> <p>Rumi-bamba, what Vol. 1. 267</p> <p style="text-align: center;">S.</p> <p>Salta de Tumbez descr. Vol. 2. 4</p> <p>—— de Frayle descr. Vol. 2. 24</p> <p>Sangagua, what Vol. 1. 269</p> <p>Sanguay, mountain of Vol. 1. 442</p> <p>San Miguel de Ibarra described Vol. 1. 314</p> <p>San Pablo, lake of Vol. 1. 319</p> <p>Santa river, how forded Vol. 2. 21</p> <p>—— prodigious current 22</p> <p>Santa Cruz, province of Vol. 2. 164</p> <p>—— city of, described Vol. 2. 165</p> <p>—— government of Vol. 2. 167</p> <p>—— when conquered 166</p> <p>—— extent of ibid.</p> <p>Santa Fé, account of Vol. 2. 186</p> <p>Santiago de Nata de los Cavellos described Vol. 1. 131</p> <p>Santiago, city of, described Vol. 2. 253</p> <p>—— earthquakes at 254</p> <p>—— its churches and convents 255</p> | <p>—— customs of the inhabitants 256</p> <p>—— tribunals of ibid.</p> <p>Sapatoes described Vol. 1. 74</p> <p>Scolecendra, account of Vol. 1. 60</p> <p>Scorpion described Vol. 1. 60</p> <p>—— kills itself 61</p> <p>Sea-cow described Vol. 1. 413</p> <p>Sea-lions described Vol. 2. 222</p> <p>Sea-wolves described Vol. 2. 220</p> <p>Sechura, town of Vol. 2. 12</p> <p>—— desert of Vol. 2. 15</p> <p>Senegualap, signal on Vol. 1. 261</p> <p>Sensitive plant described Vol. 1. 50</p> <p>Serpents near Porto-Bello Vol. 1. 99</p> <p>—— an astonishing one Vol. 1. 415</p> <p>Sesgum, signal on Vol. 1. 261</p> <p>Sheep, Peruvian, described Vol. 1. 449</p> <p>Shells, large strata of Vol. 2. 250</p> <p>—— quarries of, in the tops of mountains 251</p> <p>Shoal, a dangerous one, Vol. 2. 227</p> <p>Signal, where erected on Pichincha Vol. 1. 227</p> <p>—— on Pambamarca Vol. 1. 237</p> <p>—— on Tanlagua Vol. 1. ibid.</p> <p>—— on Carabara Vol. 1. ibid.</p> <p>—— on Changalli Vol. 1. ibid.</p> <p>—— on Oyambaro Vol. 1. 236</p> <p>—— on Pucaguaico Vol. 1. 238</p> <p>—— on Corazon 239</p> <p>—— on Papa-urco ibid.</p> <p>—— on the mountain of Milin ibid.</p> <p>—— on the mountain of Ventogotofin ibid.</p> <p>—— on the mountain of Chalapu 240</p> <p>—— on Chichichoco ibid.</p> <p>—— on Mulmul ibid.</p> <p style="text-align: right;">Signal</p> |
|--|---|

I N D E X.

Signal on Sifa-Pongo	241	Signal on the great church of	
— on Lalangufo	ibid.	Cuenca	ibid.
— on Chufay	242	— on Guapulo	263
— on Tialoma	ibid.	— on Pambamarca	ibid.
— on Sinafaguani	262	— on Campanario	ibid.
— on Bueran	242	— on Cuicocha	ibid.
— on Yafuay	243	— on Mira	ibid.
— on Borma	ibid.	Sinafaguan, signal on	Vol. 1.
— on Pugin	244		242
— on Pillachiquir	ibid.	Sifa-Pongo, signal on	Vol. 1.
— on Alparupasca	ibid.		241
— on Chinan	ibid.	Snakes near Carthagena describ-	
— on Guanacauri	ibid.	ed	Vol. 1. 58
— on the great church of		— with two heads	Vol. 1.
Cuenca	ibid.		122
— on Guapulo	245	Snakes near Guayaquil	Vol. 1.
— on Campanario	ibid.		167
— on Cofin	ibid.	Soldier Snail described	Vol. 1.
— on Mira	ibid.		61
— on each extremity of the		Sources of the Marañon	Vol. 1.
base of Yaruqui	246		381
— on Pambamarca	ibid.	Spaniards ridiculous pride of	
— on the mountain of Tan-			Vol. 1. 279
lagua	ibid.	— their drefs at	ibid.
— on the mountain of Gua-			
pulo	247	Springs very common near Lima	
— on Gumani	ibid.		Vol. 2. 97
— on Corazon	248	Strawberry of Peru, described	
— on Cotapaxi	ibid.		Vol. 1. 303
— on Chinchulagua	249	Storax-tree, described	Vol. 1.
— on Papa-urco	ibid.		374
— on the mountain of Milin		Storms, terrible ones	Vol. 2.
	ibid.		211
— on Chulapu	ibid.	— how prognosticated	Vol.
— on Jivigatfu	260		2. 214
— on Mulmul	ibid.	Sugar-canes, their quick growth	
— on Guayama	ibid.	at Carthagena	Vol. 1. 69
— on Amula	261	Sulphur, mines of	Vol. 1. 495
— on Sifa-pongo	ibid.	Sun, temple of, its grandeur	
— on Sefgum	ibid.		Vol. 2. 128
— on Senegualap	ibid.	Supay-Urco, famous mountain	
— on Chufay	ibid.	of	Vol. 1. 338
— on Sinafaguan	262	Sures, or south winds	Vol. 1.
— on Quinoaloma	ibid.		157
— on Yafuay	ibid.		
— on Namarelte	263		
— on Guanacauri	ibid.		
— on los Bonnos	ibid.		

T.

Tables of variation, see Variation

Taburones,

I N D E X.

- Taburones, an enormous fish,**
described Vol. 1. 127
Talcaguana, port of Vol. 2. 247
Tamarinds described Vol. 1. 76
Tanlagua, signal on Vol. 1. 237
Tarabita, what Vol. 1. 449
Tarija, jurisdic^t. of Vol. 2. 149
Tempests, terrible ones Vol. 1.
93
Temple of the Sun, grandeur of
Vol. 2. 128
—— an ancient one Vol. 1.
486
Terra Firma, kingdom of, de-
scribed Vol. 1. 130
Thread how dyed purple Vol. 1.
176
Tialoma, signal on Vol. 1. 242
Ticfan, village of Vol. 1. 336
Tides at Porto-Bello Vol. 1. 90
—— regular at Panama Vol. 1.
116
—— in Guayaquil river Vol. 1.
178
Tiempo muerto, what Vol. 1.
81
Tigers common in the forests of
Borto-Bello Vol. 1. 97
—— manner of killing them
98
Timber, great quantities of
Vol. 1. 199
Tintoreras, monstrous fish, de-
scribed Vol. 1. 127
Tiopullo, plain of Vol. 1. 214
Titi-caca, famous lake of Vol. 2.
160
—— splendid temple of
161
Toads, great numbers at Porto-
Bello Vol. 1. 99
Tolo, large fishery of Vol. 2.
156
Tolu, balsam of Vol. 1. 48
Tomina, jurisdiction of Vol. 2.
148
Tooth-ach, a strange remedy for
Vol. 2. 224
Totumo, what Vol. 1. 236
Trade of Carthagena Vol. 1. 78
—— of Porto-Bello Vol. 1. 101
—— of Panama Vol. 1. 124
—— of Guayaquil Vol. 1. 198
—— of Quito Vol. 1. 307
—— of Lima Vol. 2. 53
Travelling, method of Vol. 2. 7
Travesia, what Vol. 2. 212
Truxillo, city of described,
Vol. 2. 19
—— bishopric of Vol. 2. 120
Tulcar, a bird described Vol. 1.
55
Tumbez, town of Vol. 2. 5
Tunguragua, mountain of Vol.
1. 443
Tura-Bamba, plain of Vol. 1.
214
Turbonadoes, what Vol. 2. 208
V.
Valdivia described Vol. 2. 262
Valles, meaning of that word
Vol. 2. 6
Valparaíso, town of, described
Vol. 2. 280
—— bay of 283
Variation chart of Dr Hadley
Vol. 1. 14
Variation, its use in finding the
longitude Vol. 1. 16
Variations, tables of ibid.
—— how to be observed
Vol. 1. 17
—— a table of, observed
in the south-sea Vol. 1. 143
—— a table of Vol. 2. 229
—— table of Vol. 2. 314
—— table of Vol. 2. 341
—— 343
—— table of Vol. 2. 355
Vendabales, what Vol. 1. 88
Vengotafin, signal on Vol. 1.
239
Veraguas, province of, descri-
bed Vol. 1. 134
Vernon takes Porto-Bello Vol. 1.
89
Vice-

I N D E X.

Vice-roy of Lima, his power	tween Carthage and Porto
Vol. 2. 40	Bello Vol. 1. 84
—— his public en-	—— violent ones Vol. 1. 224
trance described Vol. 2. 46	—— in the south-seas, obser-
Vicho, what Vol. 1. 295	variations on Vol. 2. 27
Vicuna, described Vol. 1. 459	Wolves, sea, described Vol. 2.
Vijahua, described Vol. 1. 217	220
Ujiba, account of Vol. 1. 180	Y.
Virgin, two miraculous images	Yaguache, lieutenancy of Vol. 1.
of Vol. 1. 276	180
Univerſity of Quito, account of	Yaguoche, town of ibid.
Vol. 1. 270	Yagarchoca, lake of Vol. 1.
—— of Lima Vol. 2. 44	315
—— of Cusco Vol. 2. 132	Yerva de Gallo, or cocks herb,
Volcanoes, how formed Vol. 2.	a fabulous account of Vol. 1.
85	123
—— new ones, Vol. 2. 84	Yaraqui, plain of Vol. 1. 219
Vomito Prieto, or black vomit	—— ſignals at Vol. 2. 146
Vol. 1. 44	Yufuay, ſignal on Vol. 1. 243
W.	Yauyos, palace of, described
Water a remarkable tract of	Vol. 1. 487
Vol. 1. 14	—— another 501
Whirlwinds, dreadful ones	Z.
Vol. 1. 249	Zumbador, described Vol. 1.
Wild Indians, account of Vol. 1.	457
497	
Winds generally prevailing be-	

F I N I S.



Ulloa's Voyage. 1760 Vol. II

Received: The book was bound in full brown calf with light black sprinkles on it. The endpapers were plain, the endbands were red and white with a rolled paper support. The title was in gold on red leather, in the panel below was the vol. number in gold on black leather. The spine was elaborately decorated. The front board was detached. The sewing thread was weak and broke easily.

Treatment: The text was re sewn after guarding the signatures with japanese paper and rice starch paste. Adhesive used at the spine was Flex 720.

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